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NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	AUG 06	CAS REGISTRY enhanced with new experimental property tags
NEWS	3	AUG 06	FSTA enhanced with new thesaurus edition
NEWS	4	AUG 13	CA/CAPplus enhanced with additional kind codes for granted patents
NEWS	5	AUG 20	CA/CAPplus enhanced with CAS indexing in pre-1907 records
NEWS	6	AUG 27	Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB
NEWS	7	AUG 27	USPATOLD now available on STN
NEWS	8	AUG 28	CAS REGISTRY enhanced with additional experimental spectral property data
NEWS	9	SEP 07	STN AnaVist, Version 2.0, now available with Derwent World Patents Index
NEWS	10	SEP 13	FORIS renamed to SOFIS
NEWS	11	SEP 13	INPADOCDB enhanced with monthly SDI frequency
NEWS	12	SEP 17	CA/CAPplus enhanced with printed CA page images from 1967-1998
NEWS	13	SEP 17	CAPplus coverage extended to include traditional medicine patents
NEWS	14	SEP 24	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS	15	OCT 02	CA/CAPplus enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS	16	OCT 19	BEILSTEIN updated with new compounds
NEWS	17	NOV 15	Derwent Indian patent publication number format enhanced
NEWS	18	NOV 19	WPIX enhanced with XML display format
NEWS	19	NOV 30	ICSD reloaded with enhancements
NEWS	20	DEC 04	LINPADOCDB now available on STN
NEWS	21	DEC 14	BEILSTEIN pricing structure to change

NEWS 22 DEC 17 USPATOLD added to additional database clusters
 NEWS 23 DEC 17 IMSDRUGCONF removed from database clusters and STN
 NEWS 24 DEC 17 DGENE now includes more than 10 million sequences
 NEWS 25 DEC 17 TOXCENTER enhanced with 2008 MeSH vocabulary in
 MEDLINE segment
 NEWS 26 DEC 17 MEDLINE and LMedLINE updated with 2008 MeSH
 vocabulary
 NEWS 27 DEC 17 CA/CAPLUS enhanced with new custom IPC display
 formats
 NEWS 28 DEC 17 STN Viewer enhanced with full-text patent content
 from USPATOLD
 NEWS 29 JAN 02 STN pricing information for 2008 now available

 NEWS EXPRESS 19 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2,
 CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
 AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.

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* * * * * STN Columbus * * * * *
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FILE 'HOME' ENTERED AT 21:22:32 ON 03 JAN 2008

=> FIL BIOSIS CAPLUS EMBASE
 COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'BIOSIS' ENTERED AT 21:22:42 ON 03 JAN 2008
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FILE 'CAPLUS' ENTERED AT 21:22:42 ON 03 JAN 2008
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FILE 'EMBASE' ENTERED AT 21:22:42 ON 03 JAN 2008
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=> s bone particle
L1 97 BONE PARTICLE

=> s l1 and immobil?
L2 3 L1 AND IMMOBIL?

=> dup rem l2
PROCESSING COMPLETED FOR L2
L3 3 DUP REM L2 (0 DUPLICATES REMOVED)

=> d bib abs 1-
YOU HAVE REQUESTED DATA FROM 3 ANSWERS - CONTINUE? Y/(N):y

L3 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2003:796407 CAPLUS
DN 139:312490
TI Method of making bone particles using immobilization media
IN Morris, John W.; Petersen, Kenneth C.; Shimp, Lawrence A.;
Daugherty, Mark
P.

PA Osteotech, Inc., USA
SO PCT Int. Appl., 29 pp.
CODEN: PIXXD2

DT Patent
LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.
------------	------	------	-----------------

DATE	-----	----	-----	-----

PI	WO 2003082159	A1	20031009	WO 2003-US9878
	20030331			
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW		
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG		
	CA 2480636	A1	20031009	CA 2003-2480636
	20030331			

AU 2003228417 A1 20031013 AU 2003-228417
20030331
EP 1494624 A1 20050112 EP 2003-726166
20030331

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,
MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU,
SK

US 2006024656 A1 20060202 US 2005-509585
20050725
PRAI US 2002-368645P P 20020329
WO 2003-US9878 W 20030331

AB The present invention relates to a method for making bone particles from

bone of a variety of sizes and a workpiece forming and holding device for

use with the method. The workpiece forming device includes a base and a

base frame attached to the surface of the base. An apparatus for forming a

solidified mass of bone and immobilization medium is also provided which includes the workpiece forming device and a detachable

former member enclosing the base frame. Bone is immersed in an immobilization medium within such workpiece forming device, which is solidified to form a solidified mass of bone and immobilization

medium and then subdivided to provide particles of bone in association with

immobilization medium. The immobilization medium may be

optionally removed to leave bone particles suitable for use in orthopedic

applications including implants.

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1993:164208 CAPLUS

DN 118:164208

TI Effect of substrate presoaking treatment of support materials on the

activity of immobilized glucoamylase

AU Mukataka, Sukekuni; Negishi, Satoshi; Sato, Seigo; Takahashi, Joji

CS Inst. Appl. Biochem., Univ. Tsukuba, Tsukuba, Japan

SO Enzyme and Microbial Technology (1993), 15(3), 229-33
CODEN: EMTED2; ISSN: 0141-0229

DT Journal

LA English

AB The activity of immobilized glucoamylase was remarkably increased by presoaking treatment of the supports in soluble starch solution

Pig bone (PB) particles-100 showed the largest substrate presoaking effect among some representative support materials, increasing the activity of immobilized glucoamylase 10 fold. The improvement in the activity was due to an increase in the specific activity of the immobilized enzyme. In order to get sufficient substrate presoaking effect, a rapid crosslinking treatment of the enzyme and the substrate-pres soaked support was required. The glucoamylase immobilized on PB sheet was very stable and gave a high starch hydrolysis of DE95 (dextrose equivalent) for about 1 mo in continuous process.

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1991:38433 CAPLUS

DN 114:38433

TI Substrate presoaking effect on immobilization of protease on pig bone particles

AU Negishi, Satoshi; Sato, Seigo; Mukataka, Sukekuni; Takahashi, Joji

CS Inst. Appl. Biochem., Univ. Tsukuba, Tsukuba, 305, Japan

SO Journal of Fermentation and Bioengineering (1990), 70(5), 313-16
CODEN: JFBIEX; ISSN: 0922-338X

DT Journal

LA English

AB When pig bone (PB) particles and other support materials were presoaked in

casein solution and crosslinked with glutaraldehyde, the activity of

immobilized protease, was two or more times greater than those of the proteases immobilized on non-treated supports. Chitopearl was an exception. The highest activity, 25,000 U/g-support, was obtained

with the presoaked PB particles. The effect of presoaking the supports in

the substrate solution on the immobilized protease was also observed

with other protein substrates. The effect of the presoaking treatment

increased with an increase in the mol. weight of the protein. The increase

in the activity of the immobilized enzyme was due to increases in both the amount of adsorbed protease and specific activity.

Furthermore,

the stability of protease immobilized on PB was remarkably improved by transforming the PB particles into a sheet.

=> d his

(FILE 'HOME' ENTERED AT 21:22:32 ON 03 JAN 2008)

FILE 'BIOSIS, CAPLUS, EMBASE' ENTERED AT 21:22:42 ON 03 JAN 2008

L1 97 S BONE PARTICLE
L2 3 S L1 AND IMMOBIL?
L3 3 DUP REM L2 (0 DUPLICATES REMOVED)

=> s l1 and (water or ethanol or acid)

L4 37 L1 AND (WATER OR ETHANOL OR ACID)

=> dup rem l4

PROCESSING COMPLETED FOR L4

L5 25 DUP REM L4 (12 DUPLICATES REMOVED)

=> d bib abs 1-

YOU HAVE REQUESTED DATA FROM 25 ANSWERS - CONTINUE? Y/(N):y

L5 ANSWER 1 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2007:163020 CAPLUS
DN 147:58151
TI Biodisc tissue-engineered using PLGA/DBP hybrid scaffold
AU Ko, Youn Kyung; Kim, Soon Hee; Jeong, Jae Soo; Ha, Hyun Jung;
Yoon, Sun
Jung; Rhee, John M.; Kim, Moon Suk; Lee, Hai Bang; Khang, Gilson
CS BK-21 Polymer BIN Fusion Research Team, Chonbuk National
University,
Jeonju, 561-756, S. Korea
SO Polymer (Korea) (2007), 31(1), 14-19
CODEN: POLLDG; ISSN: 0379-153X
PB Polymer Society of Korea
DT Journal
LA Korean
AB Demineralized bone particle (DBP) has been used as one
of the powerful inducers of bone and cartilage tissue
specialization. In
this study, we fabricated DBP/PLGA scaffold for tissue
engineered disk
regeneration. We manufactured dual-structured scaffold to
compose inner
cylinder and outer doughnut similar to nature disk tissue. The
DBP/PLGA
scaffold was characterized by porosity, wettability, and water
uptake ability. We isolated and cultured nucleus pulposus (NP)
and
annulus fibrosus (AF) cells from rabbit intervertebral disk. We
seeded NP
cells into the inner core of the hybrid scaffold and AF cells
into the
outer portion of it. Cellular viability and proliferation were
assayed by

3-(4,5-dimethylthiazole-2-yl)-2,5-diphenyltetrazolium-bromide (MTT) test.

PLGA and PLGA/DBP scaffolds were implanted in s.c. of athymic nude mouse

to observe the formation of disk-like tissue in vivo. And then we observed

change of morphol. and hematoxylin and eosin (H&E). Formation of disk-like tissue was better DBP/PLGA hybrid scaffold than control.

Specially, we confirmed that scaffold impregnated 20 and 40% DBP affected

to proliferation of disk cell and formation of disk-like tissue.

L5 ANSWER 2 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2006:597345 CAPLUS

DN 145:61836

TI Continuous enzymic degradation of eel processing wastes to recover useful materials

IN Kagami, Hideto; Tominaga, Kenji

PA Fukuoka Yoman K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.
DATE	-----	----	-----	-----

PI	JP 2006158263	A	20060622	JP 2004-352782
	20041206			

PRAI	JP 2004-352782		20041206	
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AB The method comprises (1) a step to mix backbones, heads, viscera, etc., as

eel processing wastes with proteases and remove solid from the degradation

products with a solid-liquid separator, (2) a step to sep. the liquid into

light liquid containing fats/oils and heavy liquid containing water-soluble

proteinaceous components upon centrifugation, (3) a step to treat the

heavy liquid with a pore diffusion-type membrane separator to diffuse

low-mol.-weight components such as peptides and amino acids into water for separation of $\geq 50,000$ -mol.-weight components such as

the

proteases, unreacted proteins, etc. and ≥ 20 nm-diameter particles and

concentrate the peptides and the amino acids, and (4) a step to recycle the

proteases and unreacted proteins to the step (1) after concentration if necessary. Thus, minced eel backbones and Aroase XA 10 (protease) solution were continuously fed to a degradation tank at 65-68°, the degradation product was separated into bone particles and liquid with a vibrating screen, and the liquid was separated into an oil layer containing DHA, EPA, CoQ10, etc. and an aqueous layer. The aqueous layer was treated with a flat membrane (average pore size 17 nm, porosity 60%, thickness 300 µm), and water, into which the reaction products (peptides) were diffused from the aqueous layer, was concentrated with a regenerated cellulose membrane (average pore size 2 nm, porosity 30%, thickness 15 µm). A fraction, which contained the protease and unreacted proteins and was not diffused through the flat membrane, was concentrated with a hollow-fiber membrane and recycled to the enzymic degradation step.

L5 ANSWER 3 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 1

AN 2006:401402 BIOSIS

DN PREV200600393692

TI Factors affecting stiffness properties in impacted morsellized bone used

in revision hip surgery: An experimental in vitro study.

AU Fosse, Lars [Reprint Author]; Ronningen, Helge; Benum, Pal; Lydersen,

Stian; Sandven, Rolf B.

CS Norwegian Univ Sci and Technol, Norwegian Orthoped Implant Res Unit,

N-7034 Trondheim, Norway

lars.fosse@ntnu.no

SO Journal of Biomedical Materials Research, (AUG 2006) Vol. 78A, No. 2, pp.

423-431.

ISSN: 1549-3296. E-ISSN: 1552-4965.

DT Article

LA English

ED Entered STN: 9 Aug 2006

Last Updated on STN: 9 Aug 2006

AB When revising loosened joint prosthesis, impacted morsellized bone is

frequently used as organic scaffolding. We studied the relative influence

that different bone particle size, impaction energy,

and liquid content had on impacted bone stiffness. Bovine bone was morsellized in a bone mill by three grinding drums to produce bone with different chip size distribution. Next, portions of bone chips of controlled sizes were produced by a five-leveled sieve. Layer by layer of bone are constructed into pellets by our experimental impaction method. This method allows us to vary one independent factor at a time in a controlled manner while keeping the other factors constant. Stiffness for all bone pellets were measured during impaction and loading. In earlier studies, we focused on how impaction force, number of impaction strokes, and bone liquid contents influence mechanical behavior. Here, we compare the outcome of all studies using general linear models. All five factors significantly contribute to stiffness of impacted morsellized bone. Changing bone moisture has major, while increasing the number of impaction strokes beyond five per layer has minor effect. Low water content is the main contributor to highest load stiffness. Optimal stability of impacted morsellized bone is achieved with dried and well-graded particles. The number of heavy impaction strokes can be restricted. (c) 2006 Wiley Periodicals, Inc.

L5 ANSWER 4 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

AN 2006:100891 BIOSIS

DN PREV200600106418

TI Mortadella sausage formulations with partial and total replacement of beef

and pork backfat with mechanically separated meat from spent layer hens.

AU Trindade, Marco A. [Reprint Author]; Contreras, Carmen C.; De Felicio,

Pedro E.

CS Univ Estadual Campinas, Dept Food Technol, POB 6121, Campinas, SP, Brazil

trindademarco@aol.com

SO Journal of Food Science, (APR 2005) Vol. 70, No. 3, pp. S236-S241.

CODEN: JFDSAZ. ISSN: 0022-1147.

DT Article

LA English
 ED Entered STN: 8 Feb 2006
 Last Updated on STN: 8 Feb 2006
 AB Mortadella sausages were formulated with 0%, 20%, 40%, 60%, 80%, and 100% mechanically separated layer hen meat (MSLM) replacing the beef and pork backfat as raw materials. Treatments were compared by determination of shear force, sensory acceptance, and stability during cold storage (microbial analysis, thiobarbituric acid-reactive substances [TBARS], color, and descriptive sensory analysis). Mortadella with higher MSLM presented lower shear force values. TBARS index and sensory rancidity were not affected. The greater the amounts of MSLM used, the paler was the pink color observed in the sensory evaluations and the lower were the CIE a* values. All treatments presented minimal increase in the microbiological counts evaluated during storage. The limiting factor in the acceptance of the product was the perception of bone particles in mortadella containing 60% or more MSLM.

L5 ANSWER 5 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2004:515684 CAPLUS
 DN 141:59805
 TI Formable and settable polymer bone composite and method of production thereof
 IN Winterbottom, John M.; Kaes, David
 PA Osteotech, Inc., USA
 SO PCT Int. Appl., 45 pp.
 CODEN: PIXXD2

DT Patent
 LA English

FAN.CNT 5

PATENT NO.	KIND	DATE	APPLICATION NO.
WO 2004053112	A1	20040624	WO 2003-US39704
20031212			

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,

LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI,
 NO, NZ,
 OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
 TJ, TM,
 TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW,
 AM, AZ,
 BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE,
 DK, EE,
 ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,
 SI, SK,
 TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
 SN, TD, TG

CA 2510420 A1 20040624 CA 2003-2510420

20031212

AU 2003297929 A1 20040630 AU 2003-297929

20031212

EP 1578957 A1 20050928 EP 2003-797000

20031212

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,
 MC, PT,

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU,
 SK

JP 2006509539 T 20060323 JP 2004-558203

20031212

PRAI US 2002-432968P P 20021212

WO 2003-US39704 W 20031212

AB The osteoimplant composite comprises a polymer and bone-derived particles.

The composite is adapted and constructed to be formable during or immediately prior to implantation and to be set after final surgical

placement. For example, pellets of starch poly(caprolactone) were placed

in a microwave oven and heated to .apprx.54.4°, then pressed together by hand to form a larger mass of polymer. Before the polymer

cooled, partially demineralized bovine bone particles were folded into the

polymer until the polymer contained .apprx. 50% of bone particles. The

composite was then heated and formed into a desired final shape.

The

composite could be repeatedly heated and reshaped. Once formed, the

composite was subjected to approx. 10 heating/cooling cycles with no

observable degradation of handling or setting properties.

L5 ANSWER 6 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2004:333614 CAPLUS

DN 140:327165

TI Coupling agents for orthopedic composite biomaterials
IN Shimp, Lawrence A.; Knaack, David
PA Osteotech, Inc., USA
SO PCT Int. Appl., 41 pp.
CODEN: PIXXD2

DT Patent
LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.
DATE			
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PI WO 2004032988	A2	20040422	WO 2003-US31990
20031008			
WO 2004032988	A3	20040527	
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2501822	A1	20040422	CA 2003-2501822
20031008			
AU 2003277325	A1	20040504	AU 2003-277325
20031008			
US 2005008620	A1	20050113	US 2003-681651
20031008			
US 7270813	B2	20070918	
EP 1549359	A2	20050706	EP 2003-808189
20031008			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
PRAI US 2002-416904P	P	20021008	
WO 2003-US31990	W	20031008	
AB The invention provides a method for the preparation of bone-polymer composites wherein the mineral portion of the bone is treated with a coupling agent,			

e.g., a silane, a zirconate, or a titanate, before being incorporated into a biocompatible polymeric matrix. The resulting composites may be used as such or be further processed to form an osteoimplant.

L5 ANSWER 7 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2003:796407 CAPLUS
 DN 139:312490
 TI Method of making bone particles using immobilization media
 IN Morris, John W.; Petersen, Kenneth C.; Shimp, Lawrence A.;
 Daugherty, Mark
 P.
 PA Osteotech, Inc., USA
 SO PCT Int. Appl., 29 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.
WO 2003082159	A1	20031009	WO 2003-US9878
20030331			
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2480636	A1	20031009	CA 2003-2480636
20030331			
AU 2003228417	A1	20031013	AU 2003-228417
20030331			
EP 1494624	A1	20050112	EP 2003-726166
20030331			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,			

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU,
SK

US 2006024656 A1 20060202 US 2005-509585
20050725

PRAI US 2002-368645P P 20020329
WO 2003-US9878 W 20030331

AB The present invention relates to a method for making bone
particles from

bone of a variety of sizes and a workpiece forming and holding
device for

use with the method. The workpiece forming device includes a
base and a

base frame attached to the surface of the base. An apparatus
for forming a

solidified mass of bone and immobilization medium is also
provided which

includes the workpiece forming device and a detachable former
member

enclosing the base frame. Bone is immersed in an immobilization
medium

within such workpiece forming device, which is solidified to
form a

solidified mass of bone and immobilization medium and then
subdivided to

provide particles of bone in association with immobilization
medium. The

immobilization medium may be optionally removed to leave bone
particles

suitable for use in orthopedic applications including implants.

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 8 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2003:439516 CAPLUS

DN 139:31744

TI Gene transfer to bone tissues via particle gun and application
to gene

therapy for cartilage loss

IN Moriya, Hideshige; Wada, Yuichi

PA Seikagaku Kogyo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 28 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.
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PI JP 2003164289	A	20030610	JP 2001-367091
20011130			

CA 2407302	A1	20030530	CA 2002-2407302
20020927			

US 2003108531 A1 20030612 US 2002-262526
 20020930
 PRAI JP 2001-367091 A 20011130
 AB A gene for transfection into bone tissues via gene gun (particle gun), is disclosed. Preferably, hyaluronan synthase, more specifically, hyaluronan synthase-2 (Has2) coding gene is introduced into periosteum or cartilage tissue to be used for transplantation. A kit for gene transfer, comprising a gene and a carrier/support, is claimed.
 Introduction of lacZ gene and Has2 gene into periosteum using gold particle gene gun, and transplantation to cartilage deficient part of joint in rabbit, are described.

L5 ANSWER 9 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2002:595358 CAPLUS
 DN 137:145651
 TI Compositions, methods, and kits for closure of lumen openings, and for bulking of tissue
 IN Wironen, John F.; Donda, Russell S.
 PA USA
 SO U.S. Pat. Appl. Publ., 12 pp., Cont.-in-part of U. S. Ser. No. 776,404.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 4

PATENT NO.	KIND	DATE	APPLICATION NO.
US 2002106411	A1	20020808	US 2001-865318
US 2002107429	A1	20020808	US 2001-776404
US 6685626	B2	20040203	
US 2002176893	A1	20021128	US 2001-16602
WO 2002062404	A2	20020815	WO 2002-US3107
WO 2002062404	A3	20030626	

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,

PT, RO, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL,
UZ, VN, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,
RW: YU, ZA, ZW
AZ, BY, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
FR, GB, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI,
CM, GA, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI,
GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2002240228 A1 20020819 AU 2002-240228
20020131

PRAI US 2001-776404 A2 20010202
US 2001-865318 A2 20010525
US 2001-16602 A 20011022
WO 2002-US3107 W 20020131

AB Disclosed and claimed are compns., devices, methods and kits
that are
useful in occluding lumens or bulking-up regions of tissues or
organs in a
living mammal. The invention pertains to a composition
containing specific
particulate components, wherein the particulates promote
responsive body
processes that contribute to the formation of the occlusion or
bulked-up
region. The particulate, e.g. hydroxyapatite is mixed with a
carrier,
e.g. gelatin, and is applied to a lumen or other body region in
need of
closure to form occlusion (no data).

L5 ANSWER 10 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2001:871401 CAPLUS
DN 137:114438

TI Preparation and characterization of demineralized bone
particle impregnated poly(L-lactide) scaffolds
AU Khang, Gilson; Park, Chong Soo; Rhee, John M.; Lee, Sang Jin;
Lee, Young
Moo; Choi, Myoung Kyu; Lee, Hai Bang; Lee, Ilwoo
CS Department of Polymer Science and Technology, Chonbuk National
University,
Jeonju, 561-756, S. Korea
SO Korea Polymer Journal (2001), 9(5), 267-276
CODEN: KPJOE2; ISSN: 1225-5947
PB Polymer Society of Korea
DT Journal
LA English
AB In order to endow with new bioactive functionality from
demineralized

bone particle (DBP) as natural source to poly(L-lactide) (PLA) synthetic biodegradable polymer, porous DBP/PLA as natural/synthetic composite scaffolds were prepared and compared by means of the emulsion freeze drying and solvent casting/salt leaching methods for the possibility of the application of tissue engineered bone and cartilage.

For the emulsion freeze drying method, it was observed that the pore size decreased in the order of 79 μ m (PLA control) > 47 μ m (20% of DBP) > 23 μ m (40% of DBP) > 15 μ m (80% of DBP). Porosities as well as specific pore areas decreased with increasing the amount of DBP. It can be explained that DBP acts like emulsifier resulting in stabilizing water droplet in emulsion. For the solvent casting/salt leaching method, a uniform distribution of well interconnected pores from the surface to core region were observed the pore size of 80 - 70 μ m independent with DBP amount Porosities as well as specific pore areas also were almost same. For pore size distribution by the mercury intrusion porosimeter anal. between the two methods, the pore size distribution of the emulsion freeze drying method was broader than that of the solvent casting/salt leaching method due to the mechanism of emulsion formation.

Scaffolds of PLA alone, DBP/PLA of 40 and 80%, and DBP powder were implanted on the back of athymic nude mouse to observe the effect of DBP on the induction of cells proliferation by hematoxylin and eosin staining for 8 wk. It was observed that the effect of DBP/PLA scaffolds on bone induction are stronger than PLA scaffolds, even though the bone induction effect of DBP/PLA scaffold might be lowered than only DBP powder, that is to say, in the order of DBP only > DBP/PLA scaffolds of 40 and 80% DBP > PLA scaffolds only for osteoinduction activity. In conclusion, it seems that DBP plays an important role for bone induction in DBP/PLA scaffolds for the application of tissue engineering area.

L5 ANSWER 11 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 2

AN 1999:225886 BIOSIS

DN PREV199900225886

TI Supplemental citric acid and particle size of fish bone-meal influence the availability of minerals in rainbow trout *Oncorhynchus mykiss* (Walbaum).

AU Vielma, J. [Reprint author]; Ruohonen, K.; Lall, S. P.

CS Laukaa Fisheries Research and Aquaculture, Finnish Game and Fisheries Research Institute, FIN-41360, Valkola, Finland

SO Aquaculture Nutrition, (March, 1999) Vol. 5, No. 1, pp. 65-71. print. ISSN: 1353-5773.

DT Article

LA English

ED Entered STN: 17 Jun 1999
Last Updated on STN: 17 Jun 1999

AB Juvenile rainbow trout *Oncorhynchus mykiss* (Walbaum) were fed six low-phosphorus (P) diets supplemented with two different sizes of ground fish bone-meals (fine, 68 μm or less; coarse, 250-425 μm) and a coarse bone-meal diet containing four levels of citric acid (0, 4, 8 or 16 g kg^{-1} diet) to investigate the effects of pH and bone particle size on P bioavailability. The basal diet provided 3.4 g P kg^{-1} and bone-meal increased P contents to 5.4-6.0 g P kg^{-1} .

Coarse bone-meal diets supplemented with 0, 4, 8 or 16 g kg^{-1} of citric acid had pH values of 6.0, 5.7, 5.4 and 5.0, respectively.

Weight gain and whole-body water, protein and lipid contents were not influenced by bone-meal supplementation. Supplementing the basal diet with both coarse and fine bone-meal significantly increased whole-body ash content. Fish fed no bone-meal were hypophosphataemic compared with fish fed with either fine or coarse bone-meals. Phosphorus in fine bone-meal had higher availability than P in coarse bone-meal. Bone-meal supplementation significantly decreased whole-body manganese content from 8.9 $\mu\text{g g}^{-1}$ in fish fed no bone-meal to 2.3 and 4.5 $\mu\text{g g}^{-1}$ in fish fed with fine and coarse bone-meals, respectively. The concentration of magnesium increased but zinc concentration was not affected by bone-meal

supplements. Citric acid increased whole-body ash content but the influence of citric acid on the body P content was not significant ($P = 0.07$). Dietary acidification by citric acid significantly increased whole-body iron in a linear fashion. The bioavailability of dietary P can be improved by fine grinding the bone in fish meals.

L5 ANSWER 12 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on

STN

DUPLICATE 3

AN 1998:88897 BIOSIS

DN PREV199800088897

TI Inhibition of avian osteoclast bone resorption by monoclonal antibody

121F: A mechanism involving the osteoclast free radical system.

AU Collin-Osdoby, Patricia; Li, Li; Rothe, Linda; Anderson, Fred; Kirsch,

David; Oursler, Merry Jo; Osdoby, Philip [Reprint author]

CS Dep. Biol., Box 1229, Washington Univ., St. Louis, MO 63130, USA

SO Journal of Bone and Mineral Research, (Jan., 1998) Vol. 13, No. 1, pp.

67-78. print.

CODEN: JBMREJ. ISSN: 0884-0431.

DT Article

LA English

ED Entered STN: 25 Feb 1998

Last Updated on STN: 25 Feb 1998

AB Osteoclasts generate high levels of superoxide anions during bone resorption that contribute to the degradative process, although excessive

levels of this free radical may be damaging. One mechanism for their

removal is via superoxide dismutase (SOD), a protective superoxide

scavenging enzyme. We have previously described a novel developmentally

regulated 150 kDa plasma membrane glycoprotein of avian osteoclasts which

is reactive with the osteoclast-specific monoclonal antibody (Mab) 121F

and is related immunologically, biochemically, and in protein sequence to

mitochondrial Mn^{2+}/Fe^{2+} SOD. We hypothesized that this unusual osteoclast

surface component may be involved in protection against superoxides

generated during active bone resorption. Increasing concentrations of

monovalent Fab fragments prepared from Mab 121F, but not those from

another antiosteoclast Mab designated 29C, markedly inhibited both

bone particle and bone pit resorption by avian osteoclasts, while reducing tartrate resistant acid phosphatase activity and causing the morphological contraction of osteoclasts on bone.

Thus, the SOD-related membrane antigen may be essential for osteoclast

bone resorption. Osteoclast superoxide production, monitored kinetically

by cytochrome c reduction and histochemically by nitroblue tetrazolium

reduction staining, was significantly greater in the presence of 121F, but

not 29C, Fab treatment. Furthermore, the release of another free radical

known as nitric oxide, which is produced by osteoclasts, can scavenge

superoxides, and acts to potently inhibit osteoclast bone resorption, was

dose-dependently increased by 121F Fab in resorbing osteoclast cultures.

Therefore, Mab 121F binding may block the potential protective function of

the osteoclast plasma membrane SOD-related glycoprotein, leading to a

rapid elevation of superoxide levels and a subsequent rise in osteoclast

nitric oxide release, feedback messages which may be sensed by the

osteoclast as signals to cease active bone resorption.

L5 ANSWER 13 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1997:107400 CAPLUS

DN 126:122510

TI Modified osteogenic materials comprising collagen and demineralized bone

particles

IN Jefferies, Steven R.

PA Biocoll Laboratories, Inc., USA

SO PCT Int. Appl., 70 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.
DATE	-----	----	-----	-----

PI	WO 9639203	A1	19961212	WO 1996-US9749
	19960606			

W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS,

LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO,
 RU, SD,
 SE, SG
 RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR,
 GB, GR,
 IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA,
 GN

CA 2222626 A1 19961212 CA 1996-2222626
 19960606

AU 9661074 A 19961224 AU 1996-61074
 19960606

EP 851772 A1 19980708 EP 1996-918400
 19960606

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,
 MC, PT,

IE, FI
 CN 1192700 A 19980909 CN 1996-196049
 19960606

MX 9709909 A 20040823 MX 1997-9909
 19971208

PRAI US 1995-469982 A 19950606
 WO 1996-US9749 W 19960606

AB An osteogenic process and product comprise collagen and
 demineralized bone

particles. The product may contain a maximum of 20% by weight
 inorg. materials.

The product may be densified by compression. Addnl. osteogenic
 factors,

mitogens, drugs or antibiotics may be incorporated therein.
 Inorg.

materials may be bound to the organic matrix via precoating with
 a calcium or

hydroxyapatite binding protein, peptide or amino acid. The
 materials also display long lasting drug release
 characteristics. The

process and resultant composition increases the rate and
 predictability of

osteoinduction by demineralized bone matrix. In particular, this
 invention relates to compns. of demineralized bone and calcium
 or other

mineral salts which exhibit enhanced osteogenic potential. The
 osteogenic

compns. comprise between about 60% to 90% demineralized bone and
 compns.

comprising a carrier and alkaline phosphatase capable of
 inducing bone-like

structures. Thus, 10 g of demineralized bone matrix was milled
 to a

uniform particle size ranging 75-400 μ m. The particles were
 immersed in

a solution of 0.05% glutaraldehyde in neutral phosphate buffered
 isotonic

saline for 12 h with constant agitation at 4°, then filtered, washed, dried and sterilized. These activated particles may be placed directly in an osseous defect or complexed with an organic biopolymer and used.

L5 ANSWER 14 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on

STN

DUPLICATE 4

AN 1995:404159 BIOSIS

DN PREV199598418459

TI Degradation of subcutaneous implants of bone particles from normal and warfarin-treated rats.

AU Serre, C. M. [Reprint author]; Price, P.; Delmas, P. D.

CS INSERM Res. Unit 403, Fac. Med. Alexis Carrel, 69372 Lyon Cedex 08, France

SO Journal of Bone and Mineral Research, (1995) Vol. 10, No. 8, pp. 1158-1167.

CODEN: JBMREJ. ISSN: 0884-0431.

DT Article

LA English

ED Entered STN: 27 Sep 1995

Last Updated on STN: 27 Sep 1995

AB Osteoclasts are multinucleated cells specific to bone tissue and of

hemopoietic origin. They are formed by fusion of mononucleated cells in a

manner related to the formation of macrophage polykarions.

Subcutaneous

implantation of mineralized bone particles induces multinucleated giant

cell recruitment. There is controversy, however, about the nature of

these cells. Although subcutaneous implantation of bone particles derived

from warfarin-treated animals has been applied as an in vivo model to

study the role of osteocalcin in bone resorption, the exact nature of

multinucleated cells elicited in this model is still unclear.

In this

paper, subcutaneous implants of bone particles from normal and warfarin-treated rats were implanted in Sprague-Dawley rats.

Resorption

was assessed in 12 and 16 day implants by chemical analysis (calcium

content) and by histomorphometric measurement of the bone particle area and the number of multinucleated and

tartrate-resistant acid phosphatase-positive cells. No

significant difference in calcium content and bone area were observed,

after 12 or after 16 days of implantation, between implants from normal and warfarin-treated rats. The number of tartrate-resistant acid phosphatase-positive cells elicited by bone particles represented less than 25% of the number of multinucleated cells and did not differ between bone particles from normal and warfarin-treated rats. By electron microscopy, a majority of multinucleated cells did not show a ruffled border in contact with bone particles, and their morphological features were suggestive of a foreign body giant cell reaction. In our experience this model appears to elicit only a few osteoclasts among multinucleated macrophagic cells and may not be the most appropriate one for the study of resorption of normal or osteocalcin-depleted bone.

L5 ANSWER 15 OF 25 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights reserved on STN

AN 1995207008 EMBASE

TI Biochemical analysis of heterotopic ossification in spinal cord injury patients.

AU Chantraine A.; Nusgens B.; Lapiere C.M.

CS A. Chantraine, Div. Medecine Physique Reeducation, Hopital Cantonal

Universitaire, Beau-Sejour, 1211 Geneve 14, Switzerland

SO Paraplegia, (1995) Vol. 33, No. 7, pp. 398-401.

ISSN: 0031-1758 CODEN: PRPLBL

CY United Kingdom

DT Journal; Article

FS 033 Orthopedic Surgery

008 Neurology and Neurosurgery

LA English

SL English

ED Entered STN: 27 Jul 1995

Last Updated on STN: 27 Jul 1995

AB Heterotopic ossification (HO) represents a frequent complication in spinal

cord injury (SCI) patients. Samples of HO taken from SCI patients were

studied and compared to normal bone. We used a procedure of bone particle fractionation (according to their degree of mineralisation) which allowed us to establish a profile reflecting the

metabolic remodelling of bone and to analyse the organic matrix of the

newly synthesised tissue. In paraplegic patients, we noted that there was a large increase of the proportion of a degree of calcified bone in the HO as we had previously observed in cortical as well as in cancellous bone of the same patients. Based on aminoacid analyses, we observed in the newly synthesised organic matrix of HO a decreased proportion of hydroxyprolyl residues resulting either from an alteration of the prolyl hydroxylation or from the presence of an excess of non-collagen polypeptides. These results are similar to those seen in sublesional bone of the SCI patients. This study demonstrates that HO is a newly formed bone which has a high rate of turnover as is seen in growing bone. This must be taken into account for the treatment of the patients.

L5 ANSWER 16 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1995:218304 CAPLUS

DN 122:6561

TI Myeloblastic cell line expresses osteoclastic properties following

coculture with marrow stromal adipocytes

AU Benayahu, D.; Peled, A.; Zipori, D.

CS Department of Cell Biology, Weizmann Institute of Science, Rehovot, 76100,

Israel

SO Journal of Cellular Biochemistry (1994), 56(3), 374-84

CODEN: JCEBD5; ISSN: 0730-2312

PB Wiley-Liss

DT Journal

LA English

AB Osteoclasts are derived from hemopoietic precursors in the marrow. Their

differentiation pathway is still undefined, but an important role was

observed for the marrow microenvironment in the regulation of osteoclastogenesis. Various marrow stromal cell subtypes were used to

study their possible role in the formation of osteoclasts from myeloblast

(M1) cells. Interactions between M1 cells and the 14F1.1

endothelial-adipocyte stromal cell line were demonstrated in a coculture

model. M1 cells attached to the adherent layer of 14F1.1 cells and formed

distinct foci reminiscent of cobblestone areas. Following these

interactions, M1 cells developed specific enzymic activities and became multinucleated. Both mononuclear and multinuclear M1 cells became pos. to tartrate-resistant acid phosphatase (TRaP) and ATPase, a feature characteristic of osteoclasts, and were also responsive to calcitonin. Furthermore, they attached to mineralized bone particle and their membranes changed into a ruffled border at the zone of interaction with the bone matrix. The authors thus demonstrated that marrow endothelial-adipocytes may play a role in regulating the differentiation of myeloblasts into osteoclasts.

L5 ANSWER 17 OF 25 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1992:257790 CAPLUS
DN 116:257790
TI Intensification of maceration in the manufacture of gelatin
AU Losev, Yu. I.; Morochenets, E. P.; Fenina, M. Yu.; Bessarabov, A. M.
CS USSR
SO Khimicheskaya Promyshlennost (Moscow, Russian Federation)
(1992), (1),
47-8
CODEN: KPRMAW; ISSN: 0023-110X
DT Journal
LA Russian
AB A math. model of the maceration process in a semicontinuous scheme for gelatin manufacture was constructed based on the rate of diffusion of HCl to bone particle surfaces in the reactor. Anal. of the model showed that the limiting stages of the process were: (1) the internal diffusion of HCl and (2) the chemical reaction occurring on the bone particle surface. Model calcns. suggested that the time required for the maceration process could be shortened theor. from 7-9 days to .apprx.51 h.

L5 ANSWER 18 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 5
AN 1991:253209 BIOSIS
DN PREV199191133764; BA91:133764
TI BONE PARTICLES FROM GALLIUM-TREATED RATS ARE RESISTANT TO RESORPTION IN-VIVO.
AU DONNELLY R [Reprint author]; BOCKMAN R S; DOTY S B; BOSKEY A L
CS HOSPITAL SPECIAL SURGERY, 535 EAST 70TH STREET, NEW YORK, NY 10021, USA

SO Bone and Mineral, (1991) Vol. 12, No. 3, pp. 167-180.
 CODEN: BOMIET. ISSN: 0169-6009.

DT Article

FS BA

LA ENGLISH

ED Entered STN: 25 May 1991
 Last Updated on STN: 25 May 1991

AB Gallium nitrate is a clinically effective agent for the treatment of cancer related hypercalcemia. The mechanism of action of this agent was investigated following development of a quantitative in vivo bone resorption assay modified from the method of Glowacki. In a preliminary study, the time course of resorption of 50 mg subcutaneous implants of bone powder in growing rats was followed by chemical analysis of mineral (ash and Ca) contents, enzymatic and histochemical assay of tartrate resistant acid phosphatase (TRAP) activity, and image analysis of changes in particle size using von Kossa stained sections. Day 21 was chosen as a single time point for the comparison of the extent of resorption of gallium-containing and control bone particles. Resorption of bone particles containing 0.39 µg Ga/mg bone was significantly inhibited relative to control particles. Mineral content (6.7 vs. 3.6 mg), Ca content (1.72 vs. 1.37 mg), and the percentage of the field covered by bone particles (12 vs. 9%) were greater in the animals which received gallium-containing bone particles. Similarly, the number of osteoclast-like cells and the TRAP activity in the gallium-containing bone particle implants at 21 days were increased relative to controls. These data indicate that gallium incorporation into bone matrix confers resistance to resorption.

L5 ANSWER 19 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 6

AN 1991:361165 BIOSIS

DN PREV199192049390; BA92:49390

TI NORMAL BONE PARTICLES ARE PREFERENTIALLY RESORBED IN THE PRESENCE OF OSTEOCALCIN-DEFICIENT BONE PARTICLES IN-VIVO.

AU DEFRANCO D J [Reprint author]; GLOWACKI J; COX K A; LIAN J B

CS DEP CELL BIOL, UNIV MASS MED CENT, 55 LAKE AVE NORTH, WORCESTER,
MASS 01655, USA

SO Calcified Tissue International, (1991) Vol. 49, No. 1, pp.
43-50.
CODEN: CTINDZ. ISSN: 0171-967X.

DT Article

FS BA

LA ENGLISH

ED Entered STN: 13 Aug 1991
Last Updated on STN: 13 Aug 1991

AB In an in vivo model of osteoclastic bone resorption, we
previously showed
that osteocalcin-deficient bone particles (BPs), derived from
warfarin-treated rats, were resorbed 50% as well as normal BPs
and that
they recruited fewer osteoclastic cells with decreased
tartrate-resistant
acid phosphatase (TRAP) activity. In order to determine the
specificity of the resorption response, we evaluated the fate of
implanted
mixtures of normal and osteocalcin-deficient BPs. Normal and
warfarin-treated donor rats were prelabeled in vivo with
oxytetracycline
to permit identification of BPs from either source. Normal,
osteocalcin-deficient, and 50:50 mixtures of BPs (either labeled
or
unlabeled) were implanted into normal rats and recovered 12 days
later for
enzymatic (TRAP) and nondecalcified histomorphometric analyses.
The
incorporated oxytetracycline had no significant effect on
resorption of
bone particles. The recovered osteocalcin-deficient BPs were
surrounded
by fewer osteoclastic cells, were resorbed less, and contained
less
extractable TRAP activity than normal BPs. In mixed BP implants
with
normal and osteocalcin-deficient BPs, each type of bone
particle elicited the same tissue response as when implanted
separately. Remarkably, the different particles evoked
dissimilar
osteoclastic responses and were resorbed to different extents,
even when
adjacent within the same implant. These data suggest that
osteocalcin may
act as a substrate signal for resorption and that osteocalcin in
the
normal BPs does not influence the cellular response to adjacent
osteocalcin-deficient BPs.

L5 ANSWER 20 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson
Corporation on
STN
AN 1991:1085 BIOSIS
DN PREV199191001085; BA91:1085
TI COMPARISON OF BONE AND PARATHYROID HORMONE AS STIMULATORS OF
OSTEOCLAST
DEVELOPMENT AND ACTIVITY IN CALVARIAL CELL CULTURES FROM NORMAL
AND
OSTEOPETROTIC MI-MI MICE.
AU GRAVES L III [Reprint author]; JILKA R L
CS ENDOCRINOL METABOLISM 111E , VA MED CENT, 1481 W 10TH ST,
INDIANAPOLIS,
INDIANA 46202, USA
SO Journal of Cellular Physiology, (1990) Vol. 145, No. 1, pp.
102-109.
CODEN: JCLLAX. ISSN: 0021-9541.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 8 Dec 1990
Last Updated on STN: 9 Dec 1990
AB Osteoclast development was studied in cell cultures prepared
from calvaria
of neonatal osteopetrotic (mi/mi) mice or their normal
littermates, using
tartrate-resistant acid phosphatase (TRAPase), as an osteoclast
marker. In cultures from normal mice, treatment with 10 nM PTH
for 4-5
days stimulated the formation of osteoclasts. However in
cultures from
mi/mi mice, this response was only 7% \pm 5% that of normal mice
and they
were significantly smaller than osteoclasts of normal mice.
Mineralized
bone particles elicited osteoclast development in cultures from
both
normal and mi/mi mice, and osteoclast size was identical for both
genotypes. Seventy-eight to 96% of the TRAPase-positive cells
bound
125I-CT, as demonstrated by autoradiography. 125I-CT binding
characteristics were identical in cultures from both genotypes
treated
with bone particles, exhibiting a Kd of 3.3-3.6 \times 10⁻¹⁰ M.
Addition
of PTH stimulated 45Ca release from the added bone particles
only in the
case of cultures prepared from normal mice, and CT inhibited this
response. Cells from normal mice were capable of excavating
bone from the
surface of smooth cortical bone wafers, but such excavations
were rarely

seen in the case of calvarial cells from mi/mi mice. Thus, PTH-driven differentiation of osteoclasts is arrested in calvarial cell cultures from mi/mi mice, but mi/mi preosteoclasts retain the ability to express certain osteoclast markers in response to bone derived signals. We hypothesize that the lack of activity of mi/mi osteoclasts is due to the failure of mi/mi preosteoclasts to respond appropriately to resorptive agents, or to cytokines elicited by these agents.

L5 ANSWER 21 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on

STN

DUPLICATE 7

AN 1988:1113 BIOSIS

DN PREV198885001113; BA85:1113

TI IMPAIRED RECRUITMENT AND DIFFERENTIATION OF OSTEOCLAST PROGENITORS BY

OSTEOCALCIN-DEplete BONE IMPLANTS.

AU GLOWACKI J [Reprint author]; LIAN J B

CS SURG RES CHILDREN'S HOSP, 300 LONGWOOD AVE, BOSTON, MASS 02115, USA

SO Cell Differentiation, (1987) Vol. 21, No. 4, pp. 247-254. CODEN: CLDFAT. ISSN: 0045-6039.

DT Article

FS BA

LA ENGLISH

ED Entered STN: 5 Dec 1987

Last Updated on STN: 5 Dec 1987

AB This is a report of an experimental system to study differentiation of

bone-resorbing osteoclasts and demonstrates that osteocalcin, an extracellular bone-specific component, is necessary for the recruitment of

osteoclast progenitor cells. The subcutaneous implantation of devitalized

bone particles (BPs) elicits the recruitment and differentiation of

osteoclasts that resorb the BPs. In a previous study, we showed by

histomorphometric analysis that BPs that were deficient in osteocalcin

were resorbed only 60% as well as normal BPs. In this study, the mechanism of this difference was investigated by measurements of recruitment, differentiation and activity of bone resorbing cells by

normal and osteocalcin-deficient BP. Mononuclear cells were attracted to

control BPs soon after implantation. In dramatic contrast, cellularity

was depressed around osteocalcin-deficient BPs with very few
 mononuclear
 cells within the implant on day 5 (35% of control cellularity).
 In
 implants of normal BPs, tartrate-resistant acid
 phosphatase-positive multinucleated cells were evident by day 5;
 very few
 appeared in implants of osteocalcin-deplete BPs even by day 12.
 The
 amount of tartrate-resistant acid phosphatase activity in
 homogenates of the osteocalcin-deficient bone particle
 specimens not only lagged behind controls but never reached the
 maximum
 activity of control BP specimens. These data support the
 hypothesis that
 osteocalcin may function as a matrix signal in the recruitment
 and/or
 activation of cells for bone resorption.

L5 ANSWER 22 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson
 Corporation on

STN DUPLICATE 8

AN 1986:316930 BIOSIS
 DN PREV198682041235; BA82:41235
 TI BONE REMODELING DURING THE DEVELOPMENT OF OSTEOPOROSIS IN
 PARAPLEGIA.
 AU CHANTRAINE A [Reprint author]; NUSGENS B; LAPIERE C M
 CS HOPITAL CANTONAL UNIV, 1211 GENEVE 4, SWITZERLAND
 SO Calcified Tissue International, (1986) Vol. 38, No. 6, pp.
 323-327.
 CODEN: CTINDZ. ISSN: 0171-967X.

DT Article
 FS BA
 LA ENGLISH
 ED Entered STN: 8 Aug 1986
 Last Updated on STN: 8 Aug 1986

AB Osteoporosis developing during the first weeks after the onset of
 traumatic paraplegia was studied with cortical and cancellous
 samples of
 iliac crest and tibia of 14 patients, and compared to normals.
 We used a
 procedure of bone particle fractionation (according to
 degree of mineralization) that allowed us to establish a profile
 reflecting the metabolic remodeling of bone and to analyze the
 organic
 matrix of the newly synthesized tissue. In paraplegics, we
 observed a
 large increase in the proportion of little calcified bone in the
 cortical
 as well as in the cancellous bone. Based on amino acid
 analyses, we found a decreased number of hydroxyproline residues
 in the

newly synthesized organic matrix from paraplegia bone resulting either from an alteration of the prolyl hydroxylation or from the presence of an excess of noncollagen polypeptides. These results, together with previously published data reporting increased urinary hydroxylproline and calcium kinetic parameters, suggest an enhanced rate of skeletal remodeling in acute paraplegia. When investigated 2 years after injury, the patterns of distribution approach that of normal subjects.

L5 ANSWER 23 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

AN 1985:314755 BIOSIS

DN PREV198579094751; BA79:94751

TI SOME MICROBIOLOGICAL ASPECTS OF INEDIBLE RENDERING PROCESSES.

AU HANSEN P-I E [Reprint author]; OLGAARD K

CS DANISH MEAT RESEARCH INST, MAGLEGAARDSVEJ 2, DK-4000 ROSKILDE, DENMARK

SO Zentralblatt fuer Bakteriologie Mikrobiologie und Hygiene Abt 1 Originale

B Hygiene Umwelthygiene Krankenhaushygiene Arbeitshygiene Praeventive

Medizin, (1984) Vol. 180, No. 1, pp. 3-20.

CODEN: ZAOMDC. ISSN: 0174-3015.

DT Article

FS BA

LA ENGLISH

AB Thermal death (TD)-graphs for spores of Bacillus cereus and Clostridium

perfringens and heat transmission equations for animal tissues were determined. By using the heat transmission data for bones and the TD

graphs for the spores it was possible to predict the decimal reductions of

spores in the center of the largest pieces present during a given rendering process, thus establishing conditions for a bacteriologically

safe process. The calculations show that predrying for 45 min, followed

by cooking at 125° C for 15 min and final drying ensures destruction of non-sporeforming bacteria and B. anthracis spores even in

the center of 70 mm bone particles; heat-resistant spores of clostridia

are virtually unaffected. By reducing the particle size to < 40 mm, the

same process will result in a reasonable reduction of heat resistant

clostridia spores. To verify such theoretically calculated effects, a new

technique has developed in which steel tubes containing a paste inoculated with spores were inserted in bones. These were treated in a cooker, caught during discharge and examined. The results confirmed the calculations. Most modern rendering systems (Carver-Greenfield, Stork-Duke, Wet Pressing) are continuous without pressure cooking and a common feature is a fine minicing which minimizes the problem of heat penetration. To obtain information regarding the thermal sterilizing effect in such systems, investigations were made in a pilot cooker using inoculated meat-and-bone meal mixed with water and/or fat. Regardless of whether fat was added, sterility was found for samples containing water when the temperature during drying reached 110-120° C; cooking in fat only drastically increased the heat resistance of spores of both strains. Sterility was obtained only at temperatures of the order of 140° C, a fact of minor importance for rendering, where thermal treatment usually takes place with moisture present. The decimal reductions actually found were compared to calculated ones and the former were all substantially higher than the latter. Thorough investigation of sterilization in the wet pressing system confirmed that inactivation of pathogenic microorganisms during drying is obtained when temperatures reach 110° C. Calculations showed that pressure cooking at 120° C for 15 min will eliminate pathogenic microorganisms in raw materials for meat and bone pulp (liquid feed). When 1.5% formic acid is added to the finished product, a few hours of storage at 90° C will result in a sterile product.

L5 ANSWER 24 OF 25 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights

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AN 1983028766 EMBASE

TI Differential action of the bisphosphonates
(3-amino-1-hydroxypropylidene)-

1,1-bisphosphonate (APD) and disodium dichloromethylidene
bisphosphonate

(Cl(2)MDP) on rat macrophage-mediated bone resorption in vitro.

AU Reitsma P.H.; Teitelbaum S.L.; Bijvoet O.L.M.; Kahn A.J.

CS Dep. Clin. Endocrinol., Univ. Hosp., Leiden, Netherlands

SO Journal of Clinical Investigation, (1982) Vol. 70, No. 5, pp.
927-933.

ISSN: 0021-9738 CODEN: JCINAO

CY United States

DT Journal; Article

FS 026 Immunology, Serology and Transplantation

033 Orthopedic Surgery

037 Drug Literature Index

LA English

ED Entered STN: 9 Dec 1991

Last Updated on STN: 9 Dec 1991

AB The bisphosphonates

(3-amino-1-hydroxypropylidene)-1,1-bisphosphonate

(APD) and disodium dichloromethylidene bisphosphonate (Cl(2)MDP) effectively inhibit the accelerated bone resorption associated

with some

skeletal disorders, e.g., Paget's disease. However, it has not been

established whether these compounds exert their inhibitory effect by

rendering the bone mineral more resistant to degradation, by diminishing

the activity of resorbing cells, or through some combination of both

activities. In this study, we have tested these possibilities using an in

vitro resorption assay system consisting of elicited rat peritoneal

macrophages co-cultured with particles of (45)Ca-labeled, devitalized rat

bone. This assay system permits the quantitative assessment of the action

of APD and Cl(2)MDP on the two major phases of bone resorption (cell-substrate attachment and osteolysis) under circumstances where the

drugs are present continuously or, most importantly for the issues in

question, after the separate pretreatment of the particles or the resorbing cells. Our data indicate that (a) Both APD and

Cl(2)MDP at

concentrations $\geq 5 \times 10^{-6}$ M diminish macrophage-mediated (45)Ca release (i.e., bone resorption) in a log dose-dependent fashion.

(b) A

10-min pretreatment of bone particles with either bisphosphonate (P-C-P)

similarly inhibits resorptive activity, but is most pronounced with

Cl(2)MDP. However, only APD is effective in reducing resorption when

cells are preincubated (for 24 h) with P-C-P. (c) In cultures containing

both labeled and unlabeled bone, significant inhibition occurs only when

the labeled particles are coated with P-C-P (indicating that the action of

P-C-P-treated bone is highly localized). (d) P-C-P does not diminish cell-bone particle attachment, an essential step in the resorptive process. On the other hand, delaying the addition of P-C-P until after cell-bone attachment is completed significantly reduces the resorption-inhibiting effect of these compounds. (e) Cl(2)MDP reduces culture DNA content in proportion to its inhibitory effect on resorption, and both the inhibitory and cytotoxic actions of this P-C-P are dependent upon the presence of bone. On the other hand, APD is cytotoxic only at very high concentrations (10^{-4} M), acts independently of the presence of bone, and inhibits resorption without killing cells. We conclude that the mechanisms of action of APD and Cl(2)MDP are markedly different. Cl(2)MDP is a potent cytotoxin in the presence of bone and apparently exerts its inhibitory effect in this manner. APD is noncytotoxic at levels adequate to suppress resorption and, therefore, must inhibit macrophage activity by some other mechanism. Neither P-C-P appears to limit resorption by decreasing the solubility of mineralized bone matrix.

L5 ANSWER 25 OF 25 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

AN 1978:114686 BIOSIS

DN PREV197865001686; BA65:1686

TI CHARACTERIZATION OF BONE PARTICLES FROM MECHANICALLY DEBONED MEAT.

AU FIELD R A [Reprint author]; OLSON-WOMACK S L; KRUGGEL W G

CS DIV ANIM SCI BIOCHEM, UNIV WYO, LARAMIE, WYO 82071, USA

SO Journal of Food Science, (1977) Vol. 42, No. 5, pp. 1406-1407. CODEN: JFDSAZ. ISSN: 0022-1147.

DT Article

FS BA

LA ENGLISH

AB Bone particles from 5 lots of mechanically deboned meat (MDM) from beef

neck bones were characterized with regard to size and stability.

The

largest bone particle diameters were close to the theoretical limit of 460μ but average bone particle diameters ranged from 76.6μ (SD = 37.4)– 111.7μ (SD = 49.1).

Bone

particles were stable in MDM but were readily solubilized in
0.018-0.15M
HCl.

=> FIL STNGUIDE

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

94.09

94.30

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

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-11.20

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COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.24

94.54

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

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-11.20

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NEWS	5	FEB 02	Simultaneous left and right truncation (SLART) added for CERAB, COMPUAB, ELCOM, and SOLIDSTATE
NEWS	6	FEB 02	GENBANK enhanced with SET PLURALS and SET SPELLING
NEWS	7	FEB 06	Patent sequence location (PSL) data added to USGENE
NEWS	8	FEB 10	COMPENDEX reloaded and enhanced
NEWS	9	FEB 11	WTEXTILES reloaded and enhanced
NEWS	10	FEB 19	New patent-examiner citations in 300,000 CA/CAPLUS patent records provide insights into related prior art
NEWS	11	FEB 19	Increase the precision of your patent queries -- use terms from the IPC Thesaurus, Version 2009.01
NEWS	12	FEB 23	Several formats for image display and print options discontinued in USPATFULL and USPAT2
NEWS	13	FEB 23	MEDLINE now offers more precise author group fields and 2009 MeSH terms
NEWS	14	FEB 23	TOXCENTER updates mirror those of MEDLINE - more precise author group fields and 2009 MeSH terms
NEWS	15	FEB 23	Three million new patent records blast AEROSPACE into
			STN patent clusters
NEWS	16	FEB 25	USGENE enhanced with patent family and legal status display data from INPADOCDB
NEWS	17	MAR 06	INPADOCDB and INPAFAMDB enhanced with new display formats
NEWS	18	MAR 11	EPFULL backfile enhanced with additional full-text applications and grants
NEWS	19	MAR 11	ESBIOBASE reloaded and enhanced
NEWS	20	MAR 20	CAS databases on STN enhanced with new super role for nanomaterial substances
NEWS	21	MAR 23	CA/CAPLUS enhanced with more than 250,000 patent equivalents from China
NEWS	22	MAR 30	IMSPATENTS reloaded and enhanced
NEWS	23	APR 03	CAS coverage of exemplified prophetic substances enhanced
NEWS	24	APR 07	STN is raising the limits on saved answers

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

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FILE 'HOME' ENTERED AT 15:54:32 ON 24 APR 2009

=> FIL BIOSIS CAPLUS EMBASE		
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	ENTRY	SESSION
FULL ESTIMATED COST	0.22	0.22

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FILE 'EMBASE' ENTERED AT 15:54:40 ON 24 APR 2009
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=> s bone particle
L1 111 BONE PARTICLE

=> s immobili? (3a) (medium or media)
L2 1693 IMMOBILI? (3A) (MEDIUM OR MEDIA)

=> s l1 and l2
L3 1 L1 AND L2

=> d bib abs

L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN

AB The present invention relates to a method for making bone particles from bone of a variety of sizes and a workpiece forming and holding device for use with the method. The workpiece forming device includes a base and a base frame attached to the surface of the base. An apparatus for forming a solidified mass of bone and immobilization medium is also provided which includes the workpiece forming device and a detachable former member enclosing the base frame. Bone is immersed in an immobilization medium within such workpiece forming device, which is solidified to form a solidified mass of bone and immobilization medium and then subdivided to provide particles of bone in association with immobilization medium. The immobilization medium may be optionally removed to leave bone particles suitable for use in orthopedic applications including implants.

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

(FILE 'HOME' ENTERED AT 15:54:32 ON 24 APR 2009)

FILE 'BIOSIS, CAPLUS, EMBASE' ENTERED AT 15:54:40 ON 24 APR 2009

L1 111 S BONE PARTICLE
L2 1693 S IMMOBILI? (3A) (MEDIUM OR MEDIA)
L3 1 S L1 AND L2

=> s l2 and bone

L4 15 L2 AND BONE

=> dup rem l4

PROCESSING COMPLETED FOR L4

L5 11 DUP REM L4 (4 DUPLICATES REMOVED)

=> d bib abs 1-

YOU HAVE REQUESTED DATA FROM 11 ANSWERS - CONTINUE? Y/(N):y

L5 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2008:889218 CAPLUS
DN 149:170772
TI Immobilized glycan-binding proteins and methods for culture of stem cells
IN Laine, Jarmo; Satomaa, Tero; Natunen, Jari; Heiskanen, Annamari; Blomqvist, Maria; Olonen, Anne; Saarinen, Juhani; Tiitinen, Sari; Impola, Ulla; Mikkola, Milla; Valmu, Leena; Tiittanen, Minna

PA Suomen Punainen Risti, Veripalvelu, Finland; Glykos Finland Ltd
 SO PCT Int. Appl., 332pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 8

PATENT NO.	KIND	DATE	APPLICATION NO.
PI WO 2008087257 20080118	A1	20080724	WO 2008-FI50016
W:	AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW		
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM		
PRAI FI 2007-5033	A	20070118	
FI 2007-5034	A	20070118	

OS MARPAT 149:170772

AB The present invention provides methods and materials to modulate and grow

stem cells by contacting stem cells with a immobilized protein binding to

terminal glycan structures of stem cells. The modulation can be morphol.

change, change in differentiation status, biol. status, or adherence.

Methods are also disclosed to screen for such binders.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2008:640388 CAPLUS
 DN 148:599381

TI Apparatus for processing a sample in a liquid droplet and method
of using
the same

IN Kim, Nam Yong; Ying, Y. Jackie; Li, Li; Hu, Min; Lee, Yong Yeow;
Kuang,

Jinghao; Leck, Kwong Joo

PA Agency for Science, Technology and Research, Singapore

SO PCT Int. Appl., 148pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.
DATE	-----	----	-----	-----

PI	WO 2008063136	A1	20080529	WO 2007-SG393
	20071114			

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY,
BZ, CA,
CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG,
ES, FI,
GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP,
KE, KG,
KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA,
MD, ME,
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG,
PH, PL,
PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ,
TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR,
HU, IE,
IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK,
TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
TG, BW,
GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,
AM, AZ,

BY, KG, KZ, MD, RU, TJ, TM

	WO 2008063135	A1	20080529	WO 2006-SG363
	20061124			

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,
CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD,
GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG,
KM, KN,
KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD,
MG, MK,
MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL,
PT, RO,

TR, TT, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN,
 TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR,
 HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR,
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG,
 BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM

PRAI WO 2006-SG363 A 20061124

AB The invention provides an apparatus and a method of processing a biol. and/or

chemical sample in a liquid droplet. The apparatus comprises a processing

compartment, which is defined by a reservoir and an immobilization member.

The processing compartment is further adapted to accommodate a medium,

which is immiscible with the liquid droplet, and of a lower surface energy

than the liquid of the liquid droplet. The reservoir is defined by a

circumferential wall and a base. The immobilization member is arranged

within the reservoir and comprises a surface that is patterned in such a

way that it comprises at least one predefined immobilization area. The

predefined immobilization area within the patterned surface is of a higher

surface energy than the medium. Also the at least one predefined area is

of a higher surface energy than the remaining surface and of a sufficient

width in the plane of the surface to allow, in said hydrophobic medium, the immobilization of the liquid droplet on the

hydrophilic area via hydrophilic-hydrophilic or hydrophobic-hydrophobic

interactions. The remaining surface is of at most about the same surface

energy as the medium. In the method of the invention the medium is

disposed into the apparatus, such that the predefined immobilization area is

entirely covered by the medium. The liquid droplet is disposed onto the

predefined immobilization area, whereby the liquid droplet is immobilized

thereon via hydrophilic-hydrophilic or hydrophobic-hydrophobic

interactions. A process is performed on the biol. and/or
chemical sample in
said liquid droplet.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 11 BIOSIS COPYRIGHT (c) 2009 The Thomson
Corporation on STN
DUPLICATE 1

AN 2008:584954 BIOSIS

DN PREV200800584953

TI Expression of the extracellular domain of OB-cadherin as an Fc
fusion

protein using bicistronic retroviral expression vector.

AU Lira, Cristina B. B. [Reprint Author]; Chu, Khoi; Lee, Yu-Chen;
Hu, Mickey
C-T.; Lin, Sue-Hwa

CS Univ Texas MD Anderson Canc Ctr, Dept Mol Pathol, Unit 89, 1515
Holcombe
Blvd, Houston, TX 77030 USA
liracbb@gmail.com

SO Protein Expression and Purification, (OCT 2008) Vol. 61, No. 2,
pp.

220-226.

CODEN: PEXPEJ. ISSN: 1046-5928.

DT Article

LA English

ED Entered STN: 22 Oct 2008

Last Updated on STN: 22 Oct 2008

AB Osteoblast cadherin (OB-cadherin, also known as cadherin-11) is a
Ca²⁺-dependent homophilic cell adhesion molecule that is
expressed mainly

in osteoblasts. OB-cadherin is expressed in prostate cancer and
may be

involved in the homing of metastatic prostate cancer cells to
bone

. The extracellular domain of OB-cadherin may be used to
inhibit the

adhesion between prostate cancer cells and osteoblasts. In this
report,

we describe the expression of the extracellular domain of
OB-cadherin as

an Fc fusion protein (OB-CAD-Fc) in human embryonic kidney 293FT
cells

using a bicistronic retroviral vector. Coexpression of GFP and
OB-CAD-Fc

through the bicistronic vector permitted enrichment of
OB-CAD-Fc-expressing cells by fluorescence-activated cell
sorting.

Recombinant OB-CAD-Fc proteins were secreted into cell medium,
and about

0.85 mg of purified OB-CAD-Fc protein was purified from 1 l of
the

conditioned medium using immobilized protein
 A-affinity chromatography. The purified CB-CAD-Fc was
 biologically active
 because it supported the adhesion of PC3 cells and L cells
 transduced with
 OB-cadherin. The availability of OBCAD-Fc offers opportunities
 to test
 whether OB-CAD-Fc can be used to inhibit OB-cadherin-mediated
 prostate
 cancer bone metastasis in vivo or to generate antibodies for
 inhibiting the adhesion between prostate cancer cells and
 osteoblasts. (c)
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L5 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2007:259904 CAPLUS
 DN 146:291157
 TI Immobilized Notch ligand-based system for differentiation of
 hematopoietic
 progenitor cells into T cells
 IN Roy, Krishnendu; Taqvi, Sabia
 PA Board of Regents, The University of Texas System, USA
 SO PCT Int. Appl., 33pp.
 CODEN: PIXXD2

DT Patent
 LA English
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.
WO 2007027226	A2	20070308	WO 2006-US16228
WO 2007027226	A3	20070426	
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW		
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,		

GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY,

KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
PRAI US 2005-675803P P 20050428

AB The present invention generally relates to methods for the ex vivo

expansion of undifferentiated cells. More specifically, the present

invention relates to systems and methods of differentiating undifferentiated cells into a desired lineage by providing to an undifferentiated cell stromal cell conditioned medium and a differentiation inducing ligand. In particular, Notch ligand

DLL4 was

conjugated to biotinylated magnetic microbeads. It was shown that

microbeads functionalized with the Notch ligand DLL4 in combination with

stromal cell paracrine factors can be used as artificial stromal cells to

trigger Notch signaling in myoblasts and commit bone marrow hematopoietic stem cells (BMHSCs) to the T cell lineage in both co-culture

and insert culture systems in a quant. manner. In conclusion, the authors

have invented a synthetic biomaterial-based system that can effectively

trigger Notch signaling during lymphocyte development from bone marrow-derived stem cells. The system of the present invention may be

used to expand any undifferentiated cell that requires cell-derived soluble

factors and cell-contact dependent signals. The present invention does

not rely on transfected stromal cells as the signaling entity for the

creation of differentiated cells.

L5 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:13245 CAPLUS

DN 144:82068

TI M. tuberculosis glutamine synthetase and diagnostic and therapeutic

methods therefor

IN Harcourt, Rebecca Louise; Cole, Robert Alan

PA Proteome Systems Intellectual Property Pty. Ltd., Australia

SO PCT Int. Appl., 158 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

PI WO 2006000045 A1 20060105 WO 2005-AU930
20050624

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,
CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP,
KR, KZ,
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,
MZ, NA,
NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
SG, SK,
SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
VN, YU,
ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR,
HU, IE,
IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF,
BJ, CF,
CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW,
GH, GM,
KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
BY, KG,
KZ, MD, RU, TJ, TM

PRAI AU 2004-903482 A 20040625
AB The present invention provides immunogenic peptides of M.
tuberculosis
antigens, antibodies thereto, diagnostic kits and assays for
determining
infection with M. tuberculosis in patient samples, and
responsiveness to
therapy. In particular, the invention relates to a putative
glutamine
synthetase A4 (also designated "glutamine synthetase" or GS)
identified by
a proteomics approach in the body fluids of a cohort of diseased
patients,
including sputum, pleural fluid, plasma and serum. Sequence
anal.
indicates that the sequence of the M. tuberculosis protein GS
comprised a
region that appears to be a glutamine synthetase catalytic
domain in addition
to a region that appears to be a GS P-Grasp domain. The
inventors further
provides a PEPSET comprising 90 synthetic overlapping peptides
for mapping
B-cell epitopes and subsequent preparation of monoclonal and
polyclonal
antibody. Furthermore, TB-neg. sera, and sera from TB-pos.
subjects,

including both HIV-/TB+ and HIV+/TB+ subjects, are screened for the presence of antibodies to each peptide in the PEPSET. Peptides that are immunogenic in the TB-pos. cohort are selected and used in the diagnostic assays and formulations described herein. Plasmacytomas were also produced that express antibodies against selected peptides.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 11 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
 DUPLICATE 2
AN 2006:500418 BIOSIS
DN PREV200600514895
TI Bone-like tissue formation by three-dimensional culture of MG63 osteosarcoma cells in gelatin hydrogels using calcium-enriched medium.
AU Takagishi, Yoshiyuki; Kawakami, Takashi; Hara, Yusuke; Shinkai, Masashige
 [Reprint Author]; Takezawa, Toshiaki; Nagamune, Teruyuki
CS Univ Tokyo, Sch Engn, Dept Chem and Biotechnol, Bunkyo Ku, 7-3-1 Hongo,
 Tokyo 1138656, Japan
 shinkai@bio.t.u-tokyo.ac.jp
SO Tissue Engineering, (APR 2006) Vol. 12, No. 4, pp. 927-937.
 ISSN: 1076-3279.
DT Article
LA English
ED Entered STN: 4 Oct 2006
 Last Updated on STN: 4 Oct 2006
AB The aim of this study was to investigate the effect of Ca²⁺ concentration in culture medium on the promotion of osteogenesis by MG63 osteoblast-like cells and to prepare bone-like tissues by supplying Ca²⁺-enriched medium to MG63 cells immobilized in three-dimensional gelatin hydrogels. Human osteosarcoma MG63 cells were cultured on tissue culture dish under various Ca²⁺ concentrations to evaluate the effect of Ca²⁺ concentration on calcium deposition. When Ca²⁺ concentration was 8 mM, the maximum calcium deposition was obtained at day 28. Then MG63 cells were entrapped in gelatin hydrogels cross-linked by transglutaminase and cultured for 28 days, either in a standard culture medium or in medium containing 8 mM Ca²⁺. Effects of

Ca²⁺-enriched medium on osteoblastic phenotype of MG63 cells in gelatin hydrogels were analyzed in terms of cell number, calcium deposition content, and alkaline phosphatase (ALP) activity. The characteristics of calcified gelatin hydrogels were evaluated by x-ray diffraction (XRD), histological analysis, and scanning electron microscopy (SEM). After 28 days of culture, no significant difference in cell numbers was found between the different culture conditions. However, calcium content of gelatin hydrogels with cells cultured in Ca²⁺-enriched media was significantly higher than that of hydrogels with cells cultured in standard Ca²⁺ concentration medium. After 14 days of culture, ALP activity of cells cultured in Ca²⁺-enriched media was down-regulated compared with that of cells cultured in standard Ca²⁺ concentration media. XRD analysis indicated the formation of hydroxyapatite in gelatin hydrogels cultured in the Ca²⁺-enriched media at day 14, and the XRD pattern of the composite at day 21 was almost similar to that of mouse tibia. Moreover, histological analysis and SEM analysis revealed that cross-sections of hydrogels cultured in Ca²⁺-enriched media had an organic/mineral layer structure analogous to that of mouse tibia.

L5 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:129324 CAPLUS

DN 140:327018

TI Effect of surface structure on cell growth prepared by the terminal immobilized method

AU Sakurai, Toshihiko; Mizokami, Hiroshi; Furukawa, Shinichi; Sakata, Masayo;

Kunitake, Masashi; Hirayama, Chyuichi; Ihara, Hirotaka

CS Department of Applied Chemistry and Biochemistry, Faculty of Engineering,

Kumamoto University, Kumamoto, 860-8555, Japan

SO Journal of Applied Polymer Science (2004), 91(5), 3001-3008
CODEN: JAPNAB; ISSN: 0021-8995

PB John Wiley & Sons, Inc.

DT Journal

LA English

AB Substrate effects of surface morphol. and chemical structure for cell

cultures prepared by mol. terminal immobilization method were studied. When we focused attention on a Ph group as a functional moiety, the cell growth on the surface prepared by the immobilization method showed a better proliferation rate than that of a substrate prepared by the casting method. Further, from the results of mouse fibroblast L929 cell (L-cell) growth on poly(amino acid)immobilized surfaces in Dulbecco's minimal essential medium containing 10% FBS, it was indicated that the amino group was more effective than the Ph group, and that a slight difference of chemical structure had a substantial influence on cell growth. In addition, mouse bone marrow-derived Sp2/0-Ag14 cell (Sp2/0 cell) culture in ASF-104 serum-free medium, poly(amino acid)-immobilized substrates showed an almost equal proliferation rate to that in a serum-containing medium. These results showed that effective cell growth can occur on immobilized surfaces, and that detection of a weak interaction depends on the functional groups.

RE.CNT 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2003:796407 CAPLUS
 DN 139:312490
 TI Method of making bone particles using immobilization
 media
 IN Morris, John W.; Petersen, Kenneth C.; Shimp, Lawrence A.;
 Daugherty, Mark
 P.
 PA Osteotech, Inc., USA
 SO PCT Int. Appl., 29 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.
DATE	-----	----	-----	-----

PI	WO 2003082159	A1	20031009	WO 2003-US9878
	20030331			
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,			
CH, CN,	CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,			
GE, GH,				

GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ,
OM, PH,
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR,
TT, TZ,
UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES,
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI,
SK, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,
TD, TG

CA 2480636 A1 20031009 CA 2003-2480636
20030331

AU 2003228417 A1 20031013 AU 2003-228417
20030331

EP 1494624 A1 20050112 EP 2003-726166
20030331

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,
MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU,
SK

US 20060024656 A1 20060202 US 2005-509585
20050725

PRAI US 2002-368645P P 20020329
WO 2003-US9878 W 20030331

AB The present invention relates to a method for making bone
particles from bone of a variety of sizes and a workpiece
forming and holding device for use with the method. The
workpiece forming

device includes a base and a base frame attached to the surface
of the

base. An apparatus for forming a solidified mass of bone and
immobilization medium is also provided which includes
the workpiece forming device and a detachable former member
enclosing the

base frame. Bone is immersed in an immobilization
medium within such workpiece forming device, which is solidified
to form a solidified mass of bone and immobilization
medium and then subdivided to provide particles of bone
in association with immobilization medium. The
immobilization medium may be optionally removed to leave
bone particles suitable for use in orthopedic applications
including implants.

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

DN 129:90459
 OREF 129:18495a,18498a
 TI Treatment of mammalian myocardium with morphogen locally, or with
 morphogen-treated myogenic precursor cells
 IN Cohen, Charles M.; Sampath, Kuber T.
 PA Creative Biomolecules, Inc., USA
 SO PCT Int. Appl., 112 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

DATE	PATENT NO.	KIND	DATE	APPLICATION NO.
19971219	WO 9827995	A1	19980702	WO 1997-US23611
	W: AU, CA, JP, US RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE			
19971219	CA 2275436	A1	19980702	CA 1997-2275436
19971219	AU 9857119	A	19980717	AU 1998-57119
	AU 741350	B2	20011129	
19971219	EP 952845	A1	19991103	EP 1997-953356
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
19971219	JP 2001507354	T	20010605	JP 1998-528998
	PRAI US 1996-33145P	P	19961220	
	WO 1997-US23611	W	19971219	
AB	The present invention provides methods for the treatment, and pharmaceuticals for use in the treatment, of mammalian subjects at risk of, or afflicted with, loss of or damage to myocardial tissue. The methods involve the administration of certain morphogens, inducers of those morphogens, agonists of the corresponding morphogen receptors, or small mol. morphogenic activators, or implantation of cells induced with those agents. The morphogens useful in the invention include OP1, CBMP-2A (BMP-2), CBMP-2B (BMP-4), and other members of the morphogens family of the TGF β superfamily of growth and differentiation factors. Soluble human OP-1 was purified from CHO cell conditioned media by			

immobilized metal ion affinity chromatog., ion-exchange chromatog. and gel filtration. The mol. mass of the purified OP-1 was 110 kDa, which corresponds to a mature OP1 dimer (35-36 kDa) and two pro-domains (39 kDa each).

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1998:583186 CAPLUS

DN 129:301732

OREF 129:61545a,61548a

TI Carbon-Mineral carriers used for adsorption immobilization of non-growing cells

AU Kovalenko, G. A.; Kuznetsov, E. V.; Lenskaya, V. M.

CS Inst. Kataliza, SO RAN, Novosibirsk, 630090, Russia

SO Biotekhnologiya (1998), (1), 47-56

CODEN: BTKNEZ; ISSN: 0234-2758

PB Biotekhnologicheskaya Akademiya RF

DT Journal

LA Russian

AB A comparative investigation on the adsorption immobilization of non-growing bacteria cells (methanotrophs, rhodococci, Bacillus and E.

coli) on inorg. carriers has been carried out. The carriers used included

alumina, silicagel, as well as carbon-mineral carriers with the different

surface carbon contents (from 0.3 to 20% w) and carbon materials. The

adsorption characteristics of the carriers with respect to the listed

microorganisms was the subject of a careful study. It was shown that the

biocatalyst activity of the immobilized methanotrophs (methanemonooxygenase (MMO) activity, stability) were the function of the

way the immobilization had been performed. The optimum condition to

obtain an active heterogeneous biocatalyst based on non-growing immobilized cells was the cultivation of Methylosinus trichosporium in

fresh culture media prior immobilization. This made it possible to save 50% of the MMO activity of the cell suspension and

prolong the operation stability of the preparation up to 12-16 h.

L5 ANSWER 11 OF 11 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on

STN

DUPLICATE 3

AN 1981:232350 BIOSIS
DN PREV198172017334; BA72:17334
TI AN IN-VITRO ASSAY FOR T LYMPHOCYTE PROGENITORS CFU-PRET.
AU ACUFF B R [Reprint author]; COHEN J J
CS DEP MICROBIOL IMMUNOL, UNIV COLO MED SCH, DENVER, COLO 80262, USA
SO Journal of Supramolecular Structure, (1980) Vol. 14, No. 2, pp.
215-222.

CODEN: JSPMAW. ISSN: 0091-7419.

DT Article

FS BA

LA ENGLISH

AB Thy-1.2 negative progenitors give rise to Thy-1.2 positive
colony cells

when mouse bone marrow is cultured in vitro. The bone
marrow cells are immobilized in a viscous medium
containing methyl cellulose; discrete colonies are identifiable
at 2 days

and contain 30-60 cells by day 3 of culture. Colonies are
tightly packed

spheres (raspberries) and grow suspended in the gel. Growth of
the

raspberry colonies is absolutely dependent upon the presence of
the

appropriate serum (horse or human; not fetal calf) and
conditioned medium

from pokeweed mitogen-stimulated mouse spleen cells. As little
as 0.1% of

the conditioned medium is sufficient to promote raspberry colony
growth.

Under these conditions, nude mouse bone marrow yields as many
colonies (1/1000 nucleated cells plated) as normal marrow.

Thymus, lymph

node and spleen (normal or nude) do not form colonies. Colony
precursors

are predominantly in S phase of the cell cycle, as determined by
3H-thymidine suicide of fresh bone marrow. Their numbers fall
with age. Because the cells in colonies are Thy-1 positive,

peanut

agglutinin-positive and active in a pre-T cell synergy assay,
their

precursors apparently are early committed T cell progenitors;
they were

designated CFU-preT.

=> s bone

L6 1206717 BONE

=> s 16 and water

L7 23765 L6 AND WATER

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=> s 17 and divid?
L8          914 L7 AND DIVID?

=> s 18 and separat?
L9          39 L8 AND SEPARAT?

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PROCESSING COMPLETED FOR L9
L10         33 DUP REM L9 (6 DUPLICATES REMOVED)

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YOU HAVE REQUESTED DATA FROM 33 ANSWERS - CONTINUE? Y/(N):y

L10 ANSWER 1 OF 33 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All
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AN 2008210869 EMBASE
TI The analysis of bone mass and microarchitecture in
ovariectomized rat by dual energy X-ray absorptiometry and micro
CT.
AU Fan, Hui-Jie; Dai, Ru-Chun (correspondence); Sheng, Zhi-Feng;
Fang,
Ling-Na; Wu, Xian-Ping; Liao, Er-Yuan
CS Institute of Metabolism and Endocrinology, Second Xiang-Ya
Hospital,
Central South University, Changsha 410011, China.
dairuchun@yahoo.com.cn
AU Fan, Hui-Jie
CS Division of Endocrine in Fifth People' s Hospital of Zhengzhou,
Zhengzhou
450000, China.
SO Chinese Journal of Radiology, (Apr 2008) Vol. 42, No. 4, pp.
419-425.
Refs: 17
ISSN: 1005-1201
CY China
DT Journal; Article
FS 014 Radiology
027 Biophysics, Bioengineering and Medical Instrumentation
033 Orthopedic Surgery
LA Chinese
SL Chinese; English
ED Entered STN: 15 May 2008
Last Updated on STN: 15 May 2008
AB Objective: To observe and compare the changes of bone mass and
microarchitecture in ovariectomized rat left tibia by dual
energy X-ray
absorptiometry (DXA) and microCT ( $\mu$ CT). Methods: Forty
seven-month-old
SD rats were randomly divided into ovariectomized (OVX) and
sham-operated (SHAM) groups, twenty in each group. After killed
at 3

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weeks and 15 weeks post-surgery, DXA scanning were performed in the left tibia in vitro. The images of left tibia were divided into seven, isometric regions of interest (ROI1-7). When analysis finished, bone density (BD) of each ROI and the total bone were determined. The samples were fixed by 4% paraformaldehyde and then placed in the specimen holder filled with deionized water. The sensitive regions for bone mass changes were selected for scanning by Fluro. After scanning, the regions involving 0.4mm slice thickness and 2.5mm distance far end from tibial growth plate were selected as the ROI of cortical bone analysis. The regions selected as ROI of cancellous analysis, were involved in 1.2mm slice thickness and 0.7mm distance at the far end from tibial growth plate.

After three dimension reconstruction, 2D images of the maximum intensity projection and pictures of 3D microarchitecture were obtained, and BD and microarchitectural parameters were quantitatively identified. All data was statistically processed with SPSS for Windows. Results: At the 3rd week, BD of ROI1 in rat left tibia in OVX (0.2346 ± 0.0280) g/cm² was much lower than that (0.2660 ± 0.01990) g/cm² in SHAM ($P < 0.05$). While at the 15th week, BD of ROI1 (0.2527 ± 0.0161) and ROI2 (0.1862 ± 0.0052) g/cm² in OVX were both lower than SHAM (0.2793 ± 0.0229) and (0.1986 ± 0.0102) g/cm² respectively, $P < 0.01$ for both). Compared with SHAM rat [cortical area (Ct-Ar) = (0.3138 ± 0.0621) mm², marrow area (Ma-Ar) = 8.44 ± 1.25 mm², total area (T-Ar) = 8.75 ± 1.26 mm², moment of inertia (Mm) = (3.485 ± 0.373) mm⁴], there were significant increases in Ct-Ar (0.4306 ± 0.1308) mm², Ma-Ar (10.31 ± 1.98) mm², T-Ar (10.74 ± 2.05) mm², and Mm (4.101 ± 0.726) mm⁴ in OVX mice at the 3rd week ($P < 0.05$ for all). While at the 15th week, only cortical thickness (Ct-Th) (0.0235 ± 0.0024) mm showed a decrease in OVX group ($P < 0.05$). In OVX group, Ct-Th (0.0235 ± 0.0024) mm and Ct-Ar (0.2528 ± 0.0367) mm at 15 weeks were lower

than that [Ct-Th = (0.0377 ± 0.0098) mm, Ct-Ar = (0.4306 ± 0.1308) mm(2) at 3 weeks (P <0.01 for both)]. In SHAM group, inner perimeter (In-Pm) (13.38 ± 0.54) mm, outer perimeter (Ot-Pm) (13.59 ± 0.56) mm and Mm (4.096 ± 0.364) mm(4) at 15 weeks were higher than that [In-Pm = 12.41 ± 0.74 mm, Ot-Pm = 12.63 ± 0.75 mm, Mm = (3.485 ± 0.373) mm(4) at 3 weeks (P <0.01 for all)]. OVX rats had much lower volume BD(vBD) (288.2 ± 48.2) mg/mm(3), tissue BD(tBD) (604.5 ± 45.3) mg/mm(3), bone volume fraction (BVF) $(25.1 \pm 5.1)\%$, and trabecular number (Tb-N) (6.04 ± 2.94) mm⁻¹ (P <0.01 for all), but higher structure model index (SMI) 3.09 ± 0.27 and trabecular separation (Tb-Sp) (0.186 ± 0.129) mm than SHAM 2.63 ± 0.21 and (0.078 ± 0.038) mm respectively at the 3rd week (P <0.01 and P <0.05 respectively). At the 15th week, vBD (271.2 ± 50.9) mg/mm(3), BVF $(21.6 \pm 5.2)\%$ and Tb-N (3.21 ± 1.92) mm⁻¹ in OVX were still lower than SHAM [vBD = (389.8 ± 77.0) mg/mm(3), BVF = $(30.9 \pm 6.0)\%$, Tb-N = (7.44 ± 3.53) mm⁻¹ respectively (P <0.01 for all)], SMI 3.11 ± 0.36 and Tb-Sp (0.370 ± 0.215) mm in OVX were also higher than SHAM 2.58 ± 0.36 and (0.141 ± 0.104) mm (P <0.01 for both), but no significant difference of tBD could be found. In OVX group, the scores of tBD (691.0 ± 36.7) mg/mm, Tb-Th (0.040 ± 0.009) mm, Tb-N (3.21 ± 1.92) mm⁻¹, Tb-Sp (0.370 ± 0.215) mm in the 15th week were higher than that [tBD = (604.5 ± 45.3) mg/mm, Tb-Th = (0.030 ± 0.002) mm, Tb-N = (6.04 ± 2.94) mm⁻¹, Tb-Sp = (0.186 ± 0.129) mm respectively] in the 3rd week (P <0.05 for all), while there were no differences between the 3rd and the 15th week in SHAM group.

Conclusions:
DXA is weak in detecting the tiny changes of BD though it is convenient and non-invasive. μ CT is suitable to detect the changes of bone mass and microarchitecture.

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AN 2007542418 EMBASE

TI Effects of different conditions on bone marrow mesenchymal stem cells differentiating into cardiomyocyte-like cells in vitro.

AU Wang, Meng-Hong; Wen, Yuan; Zhang, Z.L.; Huang, J.

CS Department of Cardiology, Nanchang University, Nanchang 330006
Jiangxi
Province, China.

AU Xie, An; Wang, Yang, Dr. (correspondence)

CS Institute of Urinary Surgery, Nanchang University, Nanchang
330006 Jiangxi
Province, China. wang63cn@sina.com

SO Journal of Clinical Rehabilitative Tissue Engineering Research,
(21 Oct
2007) Vol. 11, No. 42, pp. 8506-8509.
Refs: 21
ISSN: 1673-8225

CY China

DT Journal; Article

FS 029 Clinical and Experimental Biochemistry

LA Chinese

SL English; Chinese

ED Entered STN: 22 Nov 2007
Last Updated on STN: 22 Nov 2007

AB Aim: Cellular therapy of bone marrow mesenchymal stem cells
(BMSCs) for myocardial injury has improved ventricular function,
but the
mechanism of benefit is unclear. The purpose of this study was
to
investigate the effects of different conditions on inducing
BMSCs to
differentiate into cardiomyocyte-like cells in vitro. Methods:
The
experiment was conducted in the Institute of Urinary Surgery,
First
Affiliated Hospital of Nanchang University from May 2005 to
April 2006. 1
Bone marrow was donated by healthy adult with informed consent.
Human fetus aged 16 weeks induced by labor with water bag was
donated by their parents. 2 BMSCs were harvested from bone
marrow of healthy donors with lymphocyte isolation medium and by
BMSCs
adherence. Passage-4 BMSCs were used for experiments. Two
groups were
divided as biological induction group and chemical induction
group. In the biological induction group, BMSCs were induced in
three
different ways: with neonatal cardiomyocytes in direct
cell-to-cell
coculture system, BMSCs and cardiomyocytes were cultured in two
chambers
separated as indirect coculture system, IBMSCs were cultured in
media that had been conditioned by homogenate of cardiomyocytes.
In
chemical induction group, the 4th passage BMSCs underwent
induction by
being exposed to different concentrations (5, 10 and 15 μ mol) of

5-azacytidine (5-aza) for 12, 24 and 48 hours, respectively. 3
Immunofluorescence staining was performed to detect cytoplasmic
sarcomeric
 α -actin. Results: 1 BMSCs differentiated into
cardiomyocyte-like
cells only when they cocultured in direct cell-to-cell way with
neonatal
cardiomyocytes, but not in other biological induction modes. 2
In chemical
induction group, cytoplasmic sarcomeric α -actin was not found
after
immunofluorescence staining. In 5-azacytidine-treated cultures,
cardiomyocyte-like cells derived from BMSCs did not appear.
Conclusion: 1
BMSCs could be triggered by neonatal cardiomyocytes to
differentiate into
cardiomyocyte-like cells and the mechanical factors were
obligatory ones
for cardiomyogenic differentiation. 2 It was not confirmed in
our
experiment whether BMSCs could be induced to differentiate in an
expected
cardiomyogenic way by 5-azacytidine-treatment.

L10 ANSWER 3 OF 33 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All
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AN 2007292298 EMBASE

TI Effects of the long-term intake of low-dose ethanol on the spongy
bone metabolism of growing mice.

AU Chen, Yan; Wu, Tie, Prof. (correspondence); Chen, Wen-Shuang;
Ling, J.

CS Department of Bone Biology, Guangdong Medical College, Zhanjiang
524023

Guangdong Province, China. wutie@gdmc.edu.cn; chyang@gdmc.edu.cn

SO Journal of Clinical Rehabilitative Tissue Engineering Research,
(8 Apr

2007) Vol. 11, No. 14, pp. 2699-2701.

Refs: 9

ISSN: 1673-8225

CY China

DT Journal; Article

FS 029 Clinical and Experimental Biochemistry

033 Orthopedic Surgery

LA Chinese

SL English; Chinese

ED Entered STN: 2 Jul 2007

Last Updated on STN: 2 Jul 2007

AB Aim: To observe the effects of low dose ethanol intake on the
spongy

bone metabolism of growing mice. Methods: The experiment was

conducted in the animal center of Guangdong Medical College from
October

2004 to March 2005. Thirty six-week-old clean Kunming mice of 25-30 g were randomly divided into three groups: 1 basal control group: The mice were killed after aesthesia to sample; 2 normal control group: The animals were infused with 10 mL/kg daily distilled water; 3 ethanol group: 0.5 volume fraction ethanol (selected according to the preliminary experiment results) was infused by 4 g/kg daily (equivalent to a 60 kg adult intake 30 g ethanol daily) for 60 days. All mice were killed under aesthesia and their proximal tibia was harvested for undecalcified sections and the bone metabolism indexes were measured by automatic image-analysis system for bone histomorphometry. Results: All 30 mice were involved in the result analysis. 1 Influence of ethanol on the static and dynamic parameters of the proximal tibia: Compared with the normal control group, the trabecular area percentage of the ethanol group was decreased obviously $[(9.77 \pm 3.30)\%, (3.31 \pm 0.94)\%, P < 0.05]$, bone formation rate was decreased $[(27.46 \pm 4.55)\%, (17.97 \pm 6.91)\%, P < 0.05]$; trabecular separation degree was increased $[(430.20 \pm 177.91), (1115.37 \pm 320.45) \mu\text{m}, P < 0.05]$, and osteoclast of trabecular perimeter inclined to increase. 2 Effect of ethanol on the bone biomechanics parameters: The maximum resistant stress and structure intensity value of collum femoris of the ethanol group were significantly lower than the normal control group [maximum resistant stress: $(46.93 \pm 11.70), (128.93 \pm 10.48) \text{ MPa}$; structure intensity: $(20.80 \pm 2.42), (29.48 \pm 2.52) \text{ N}$, $P < 0.01$]. Conclusion: Low dose ethanol intake could decrease the bone formation rate and result in the trabecular bone loss of growing mice.

L10 ANSWER 4 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
 AN 2007:404116 BIOSIS
 DN PREV200700399169
 TI Effects of the stilbene extracts from *Cajanus cajan* L. on ovariectomy-induced bone loss in rats.
 AU Zheng Yuan-yuan [Reprint Author]; Yang Jing; Chen Di-hua; Sun Lan
 CS Chinese Acad Med Sci, Inst Basic Med Sci, Beijing 100005, Peoples R China
 sunlan@pumc.edu.cn
 SO Yaoxue Xuebao, (MAY 2007) Vol. 42, No. 5, pp. 562-565.
 CODEN: YHHPAL. ISSN: 0513-4870.
 DT Article
 LA Chinese
 ED Entered STN: 25 Jul 2007

Last Updated on STN: 25 Jul 2007

AB The *Cajanus cajan* L. is a natural plant, which contains lots of potential

active components. The effects of the stilbene extracts from *Cajanus*

cajan L. (sECC) on ovariectomy (OVX) induced bone loss in rats were identified. All experimental female rats were divided into 6 groups, i. e., sham-operated rats, OVX rats, 17 beta-estradiol (E-2)-treated rats, sECC-treated rats with three dosages, 50, 100, and 200

mg (.) kg(-1), separately. Two weeks after the operation, different dosage of sECC, E-2 or deionized water were given to the 6 groups of rats, respectively for another 8 weeks through stomach.

Then, all rats were killed. The body weight and uterus wet weight were

measured. Contents of serum E-2, follicle stimulating hormone (FSH), and

luteinizing hormone (LH) were measured by radioimmunoassay. Femoral

morphology was observed by HE stain. The results showed that there were

no changes of the uterine weight and serum E-2 concentration in sECC-treated rats compared with OVX rats. However, the serum FSH and LH

concentrations reduced by 11. 5% and 15. 2% ($P < 0. 05$), respectively. By

HE staining, it is found that the 60% of the femur structure had been

significantly improved in OVX rats treated with 200 mg (.) kg(-1) of sECC.

The trabeculae were thicker and larger than that of OVX rats. It is clear

that sECC improved femoral morphological structure and decreased FSH and

LH contents without affecting serum E-2 level and uterine weight in OVX

rats. The results suggested that sECC had potential action in treatment

of postmenopausal osteoporosis.

L10 ANSWER 5 OF 33 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights

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AN 2007132046 EMBASE

TI Treatment of stroke in rats with bone marrow mesenchymal stem cells.

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AU Zheng, Li-Fen; Fan, Xiao-Tong; Wang, Yu; Ma, Wen-Bin; Li, Gui-Lin; Dou,

Wan-Chen; Zhang, Zhen-Xing; Li, Shi-Fang; Feng, Ming; Han, Qin;
 Li,
 Zhao-Jian; Zhang, Zi-Heng; Kang, Jun; Kong, Yan-Guo; Wang,
 Ren-Zhi; Zhao,
 Chun-Hua
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 SO National Medical Journal of China, (16 Jan 2007) Vol. 87, No. 3,
 pp.
 184-189.
 Refs: 16
 ISSN: 0376-2491
 CY China
 DT Journal; Article
 FS 025 Hematology
 029 Clinical and Experimental Biochemistry
 008 Neurology and Neurosurgery
 LA Chinese
 SL Chinese; English
 ED Entered STN: 17 Apr 2007
 Last Updated on STN: 17 Apr 2007
 AB Objective: To investigate the effects of treatment of stroke in
 rats with
 bone marrow mesenchymal stem cells (BMSCs) and mechanism thereof.
 Methods: Bone marrow of a healthy volunteer was collected and
 the BMSCs were separated with density gradient centrifugation.
 The hBMSC were cultivated and harvested until the third passage.
 A number
 of adult male Sprague-Dawley rats received corresponding
 behavioral
 training before surgery and underwent transient middle cerebral
 arterial
 occlusion (MCAO) for 2 hours. Sixty of them showing the scores
 of 6-12
 according to the modified neurological severity score system
 were randomly
 divided into 2 groups: treatment group (n = 48, injected into the
 cortex around the ischemic areas with hBMSCs $3 \times 10^5/15 \mu\text{l}$)
 and
 control group (n = 12, injected with D-Hanks solution $15 \mu\text{l}$ 24
 hours
 after the establishment of MCAO models. Morris water maze test,
 Rotarod test and adhesive-removal test were performed since the
 4th day to
 the 32 day after transplantation once every 3 days. 1, 2, 3, and
 4 weeks
 after the transplantation 12 rats from each group were killed
 randomly to
 take out their brains. Immunofluorescence was used to identify
 the
 migration, survival and differentiation of the hBMSC. Results:
 A large
 number of hBMSC could be seen within 2 weeks after
 transplantation. The

number of hBMSC decreased since the 21st day after
 transplantation and few
 cells could be found at the end of 1 month after. No definite
 evidence
 supported the differentiation of neural cells derived from the
 hBMSCs
 during the whole process. Morris water maze test showed that
 the mean escape time 1 week after transplantation of the
 treatment group
 was (69 ± 10) s, significantly shorter than that of the control
 group
 $[(120 \pm 0)$ s, $P < 0.05]$ The significant difference persisted
 until the
 4th week($P > 0.05$]. Rotarod test with the speed of 10 r/min
 showed that
 the mean latency period 10 days after transplantation of the
 treatment
 group was (167 ± 18) s, significantly longer than that of the
 control
 group $[(37 \pm 19)$ s, $P < 0.05]$. The significant difference
 persisted
 until the experimental terminal. The adhesive-removal test
 showed that
 the mean latency period 13 days after transplantation of the
 treatment
 group was (33 ± 8) s, significant shorter than that of the
 control
 group $[(84 \pm 13)$ s, $P < 0.05]$. The significant difference
 persisted
 until the experimental terminal. Conclusion: Injection of
 hBMSCs into
 brain cortex improves neurological functional recovery after
 stroke. The
 transplanted cells can migrate and survive for a certain period,
 but no
 hBMSC express proteins phenotype of neural cells.

L10 ANSWER 6 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2007:197203 CAPLUS

DN 146:294667

TI Method for extracting highly concentrated calcium powder from
 pickled

anchovies, which comprises extraction, centrifugal separation,
 steaming, drying and crushing steps, and highly concentrated
 calcium

powder obtained thereby

IN Kim, Man Do

PA S. Korea

SO Repub. Korean Kongkae Taeho Kongbo, No pp. given
 CODEN: KRXXA7

DT Patent

LA Korean

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.
DATE			
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PI KR 2006102305	A	20060927	KR 2006-83097
20060830			
US 20080057166	A1	20080306	US 2007-652975
20070111			
PRAI KR 2006-83097	A	20060830	
AB	A method for extracting highly concentrated calcium powder from pickled anchovies is provided to obtain natural calcium powder with high reliability, and to		
	reduce the cost by reutilizing the residue of liquid pickled anchovies. The		
	method for extracting highly concentrated calcium powder from pickled anchovies		
	comprises the steps of: extracting fermented and aged pickled anchovies to sep.		
	them into liquid pickled anchovies and the residue; introducing the residue		
	and hot water at 70-80 C into an agitator in a weight ratio of 5:5		
	and agitating the materials; introducing the mixture into a centrifugal		
	separator to separator a solid material mainly containing anchovy bones and solution containing shells, flesh and oil of anchovies;		
	steaming the solid material at 150-200 C for 15 min to sterilize and		
	disinfect the solid material; drying the steamed solid content to remove		
	water; and crushing the dried solid material into finely divided powder.		

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AN 2006580005 EMBASE

TI Prevention of bone loss by aqueous extract of Epimedii sagittatum in an ovariectomized rat model of osteoporosis.

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AU Qin, Lu-Ping; Zheng, Han-Chen; Zhang, Qiao-Yan

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SO Journal of Chinese Integrative Medicine, (6 Nov 2006) Vol. 4,
No. 6, pp.
628-633.

Refs: 15

ISSN: 1672-1977

CY China

DT Journal; Article

FS 029 Clinical and Experimental Biochemistry
033 Orthopedic Surgery
037 Drug Literature Index

LA English

SL Chinese; English

ED Entered STN: 11 Dec 2006

Last Updated on STN: 11 Dec 2006

AB Objective: To investigate the prevention effect of aqueous
extract of

Epimedium sagittatum (ESE) on ovariectomy-induced (OVX) bone loss
in rats. Methods: Rats were divided into sham-operated and OVX
groups. The OVX rats were divided into four groups treated with
distilled water, 17 β -estradiol (1 mg/kg, ig) and ESE (0-5
and 1 g/kg, ig) for 11 weeks. Serum calcium, phosphorus,
estradiol,

bone gla protein concentrations and serum alkaline phosphatase
activity were measured. Bone density was assayed by dual-energy
X-ray absorptiometry. The undecalcified longitudinal proximal
tibial

metaphysical sections were cut and stained for the bone
histomorphometric analysis. Results: In OVX rats, alkaline
phosphatase

activity in serum was markedly increased by ESE treatment, which
had no

obvious influence on the body weight. Meanwhile, atrophy of
uterus and

descent of bone mineral density were suppressed by ESE
treatment. In addition, ESE completely corrected the decreased
concentrations of calcium and E(2) in serum observed in OVX rats.

Histological results also showed ESE prevented the increases in
trabecular

separation (Tb. Sp) in OVX rats whereas it did not alter
trabecular thickness (Tb. Th) and trabecular number (Tb. N) in
OVX rats.

Moreover, ESE had remarkable effect on bone formation rate with
bone volume as referent (BFR/BV) and bone formation rate
with bone surface as referent (BFR/BS). Conclusion: The
findings assessed on the basis of biochemical test, bone mineral
density and histomorphometric parameters show that aqueous
extract of

Epimedium sagittatum has a definite antiosteoporotic effect and
can prevent
the OVX-induced bone loss in rats.

L10 ANSWER 8 OF 33 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights reserved on STN

AN 2007040449 EMBASE

TI Survival and antigen expression of human cord blood karyocytes in brain of hypoxic-ischemic newborn rats.

AU Zhu, Mei-Ling, Dr. (correspondence); Luo, Wei-Qiong; Zou, Cui-Xian

CS Shenzhen Baoan Blood Station, Shenzhen 518101 Guangdong Province, China.

AU Li, Yan; Na, Xiao-Dong; Lei Jun-Xia, X.; Xiang, Peng; Zhang, Xiu-Ming; Li, Shu-Nong

CS Department of Pathophysiology, Medical College, SunYat-Sen University, Guangzhou 510089 Guangdong Province, China.

AU Peng, Ai-Jun

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SO Chinese Journal of Clinical Rehabilitation, (10 Oct 2006) Vol. 10, No. 37, pp. 1-3.
Refs: 10
ISSN: 1671-5926 CODEN: ZLKHAH

CY China

DT Journal; Article

FS 025 Hematology
029 Clinical and Experimental Biochemistry
005 General Pathology and Pathological Anatomy
008 Neurology and Neurosurgery

LA Chinese

SL English; Chinese

ED Entered STN: 12 Mar 2007
Last Updated on STN: 12 Mar 2007

AB Aim: To observe the survival and antigen expression of human cord blood karyocytes in hypoxic ischemic encephalopathy (HIE) newborn rats.
Methods: The experiment was carried out at Laboratory of Stem Cell Research, Shenzhen Baoan Blood Station from September 2002 to March 2004.
(1) Hespan sedimentation was used to separate karyocytes from human cord blood. (2) A total of 64 F344 newborn rats aged 1 day from 5 nests were divided into three groups randomly according to nests: normal group, no intervention; model group: the hypoxic ischemic models were made by left carotid artery ligation with hypoxia of 0.08

volume fraction for 3 hours; human cord blood karyocytes group:
 human cord
 blood karyocytes (1.0-2.0) $\times 10^6$ were stereotaxically injected
 24 hours
 after establishing models. (3) On day 42, the Morris water maze
 test was performed to evaluate the pups' spatial learning and
 memory abilities. All pups were then killed at week 10 under drugged
 state.
 Pathological diagnosis, HE staining and indirect
 immunofluorescence were
 used to evaluate the living and differentiation state of human
 cord blood
 karyocytes in HIE rats' brain. Results: Of the 64 rats, 20 rats
 died in
 the experiment, and 17, 11 and 16 rats in the normal group,
 model group
 and human cord blood karyocytes group, respectively were
 involved in the
 result analysis. (1) Result of HIE group: The rats in the model
 group
 appeared behavioral disturbance. Pathological section appeared
 cell
 degeneration, necrosis, phagocytosis of glial cells, vascular
 cannula,
 tuberculation of glial cells induced by typical hypoxia and
 ischemia. (2)
 Morris water maze test showed that at day 42 the spatial
 recognition and memory ability of the rats in human cord blood
 karyocytes
 group was better significantly than that in the model group ($P < 0.01$),
 which had insignificant difference with normal control group. (3)
 Pathological diagnosis, HE staining and indirect
 immunofluorescence showed
 that a mass of transplanted cells in the entering needle part,
 distributed
 in a mass or scatteredly, migrated towards around in the human
 cord blood
 monocyte group; Blood wall of left brain showed a plenty of cell
 migration; Expressive rate of glial fibrillary acidic protein in
 transplanted cells was 4.59%, and the positive expressive rate of
 neuron-specific enolase was 2.68%. Conclusion: Human cord blood
 karyocytes can survive partially at the hypoxic-ischemic damaged
 brain of
 newborn rats, express glial fibrillary acidic protein and
 neuron-specific
 enolase antigen, and effectively improve the functional defect
 of hypoxic
 ischemic newborn rats.

reserved on STN
AN 2006054628 EMBASE
TI Bone metabolism changes of the rats with diabetic osteoporosis
and the intervention effect of Shuanghuang yigu recipe.
AU Li, Sai-Mei, Dr. (correspondence); Chen, Chang-Qing; Xiong,
Li-Hua; Deng,
Chang-Qing; Wang, Zhi-Gao; Zhang, Xin-Liang; Zhu, Yan-Fang; Mo,
Wei
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SO Chinese Journal of Clinical Rehabilitation, (21 Sep 2005) Vol.
9, No. 35,
pp. 187-189.
Refs: 5
ISSN: 1671-5926 CODEN: ZLKHAH
CY China
DT Journal; Article
FS 010 Obstetrics and Gynecology
027 Biophysics, Bioengineering and Medical Instrumentation
003 Endocrinology
030 Clinical and Experimental Pharmacology
033 Orthopedic Surgery
037 Drug Literature Index
LA English
SL English; Chinese
ED Entered STN: 3 Mar 2006
Last Updated on STN: 3 Mar 2006
AB Background: Estradiol is generally recognized to effectively
prevent and
treat osteoporosis in patients with menopause, but its side
effect and
possible risk restricts its application. Traditional Chinese
medicine is
noticed for its crude origin, concept of wholism and multiple
target point
effect. Objective: To establish the model of rat with diabetic
osteoporosis after menopause by the compound method of
ovariectomy plus
streptozotocin, and to probe into the therapeutic effect of
shuanghuang
yigu recipe on the osteoporosis in rats with diabetics from bone
metabolism angle and its dose-effect relationship. Design:
Completely
randomized design and controlled experiment. Setting:
Department of

Diabetics, First Affiliated Hospital, Guangzhou University of Traditional

Chinese Medicine. Materials: The experiment was carried out in the key

laboratory of Chinese Medicine Therapy of Difficult and Complicated

Diseases, Guangzhou University of Traditional Chinese Medicine from June

to December 2002. Totally 150 Sprague Dawley (SD) female rats of clean

class were recruited and randomly divided into 5 group: namely, sham-operation, model group, shuanghuang yigu recipe 23.00, 5.75 g/kg

group and nilestriol group with 30 rats in each group. Methods: (1) Model

of rats with ovariectomy: The rats were anesthetized with the antisepsis

by iodine, the nick was cut along the middle line of the back and from up

to bottom. Then the uterus angle was tied and cut off and the ovary was

extirpated. The treatment of the sham-operation group was the same as

model groups except that the ovary did not need to be extirpated. (2)

Diabetic rats model with overiectomy: One week after the ovariectomy, rats

were fasted for 12 hours. Next step was to intraperitoneally inject

streptozotocin (STZ) with the dosage of 45 mg per kilogram. The blood

sample should be drawn at the time of 24 hours and 72 hours later separately by cutting tails. Then blood glucose was tested with blood glucose monitor of American Abbott Laboratories Ltd. The rats whose

blood glucose was higher than 11.1 mmol/L were recruited. (3) Diabetic

osteoporosis rats model with ovariectomy: After the overiectomy were

performed in the diabetic osteoporosis rats, the rats were raised.

Deoxypyridinoline (DPD) and biomechanical index were tested, if they were

significantly lower than that of the normal control group, the models were

considered to be successfully established. (4) Grouping intervention.

Shuanghuang yigu 23.00, 5.75 g/kg groups and nilestriol group were given

23.00 g/kg, 5.75 g/kg, 0.33 mg/kg of corresponding drugs after the success

of model making. Traditional Chinese medicine was made into liquid by

adding distilled water with the dosage of 1 g/mL and the rats were stomach-perfused in the morning and evening. The nilestriol group was accepted intragastric administration every 4 weeks with the dosage of 0.15 g/L. The whole duration of experiment was 24 weeks. (5) Body mass of the rats was weighted at the end of the experiment; Fasting urinary calcium and urinary creatinine were tested with standard method after urine and blood of venous sinus of orbit were collected. Urinary deoxypyridinoline was used with high performance liquid chromatography; Diastatic hemoglobin (HbA1c) was tested with immune agglutination method; estrogen (E2), Calcitonin (CT), bone gla protein (BGP) and bone alkaline phosphatase (BALP) were tested with Radioimmunoassays. (6) Statistical analysis: Analysis of variance was used for the comparison of multi-groups and t test was used for comparison between groups. Main outcome measures: Comparison of bone metabolism, biochemical criterion of blood and urine as well as body mass. Results: During the course of experiment, 98 rats were died or failed to be model. In the long run, 52 rat data was put into final analysis. (1) At the end of experiment, the body mass and estrogen level in the model group, shaunghuang yigu recipe 23.00 g/kg group and 5.75 g/kg group and nilestriol group were significantly lower than that in the sham-operation group ($P < 0.01$). And levels of diastatic hemoglobin (HbA1c) and bone alkaline phosphatase (BALP) in these groups were significantly higher than that in the sham-operation group ($P < 0.01$). (2) The urinary DPD/Cr and urinary Ca/Cr in the model group were significantly higher than that in the sham-operation group ($P < 0.01$). Calcitonin (CT) of model group was significantly lower than that in the sham-operation group ($P < 0.05$). The urinary DPD/Cr and urinary Ca/Cr in the sham-operation group, shuanghuang yigu recipe 23.00 g/kg group, 5.75 g/kg group and nilestriol group were significantly lower than that in the model group ($P < 0.05-0.01$). And the difference of the groups was not significant. (3) The estrogen level in the nilestriol group was

significantly higher than that in the shuanghuang yigu recipe
 23.00 g/kg
 and 5.75 g/kg group and model group ($P < 0.01$). Calcitonin
 (CT) of
 shaunghuang yigu 23.00 g/kg, 5.75 g/kg groups was higher than
 that in the
 model group and nilestriol group ($P < 0.05$). And the
 shuanghuang yigu
 recipe 5.75 g/kg group was shown the most significant difference
 ($P <$
 0.01). (4) Bone gla protein (BGP) in the model group was close
 to that in the sham-operation group ($P > 0.05$), BGP in the
 shuanghuang
 yigu recipe 23.00 g/kg and 5.75 g/kg group and nilestriol group
 were
 significantly higher than that in the sham-operation group and
 model group
 ($P < 0.05-0.01$), and the shuanghuang yigu recipe 23.00 g/kg
 group had most
 significant increase ($P < 0.01$). Conclusion: Shuanghuang yigu
 recipe can
 restrain the absorption and promote the bone formation by
 reducing the excretion of DPD/Cr and Ca/Cr and improving the
 level of CT
 and BGP. Shuanghuang yigu recipe was showed to have more
 significant
 effects than nilestriol group but the dose-effect relationship
 cannot be
 found out.

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AN 2005502225 EMBASE

TI Effect of Yigu capsule drug-containing serum on the expression of
 osteoprotegerin mRNA in osteoblasts.

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SO Chinese Journal of Clinical Rehabilitation, (21 May 2005) Vol.
 9, No. 19,

pp. 180-182.

Refs: 11

ISSN: 1671-5926 CODEN: ZLKHAH

CY China

DT Journal; Article

FS 029 Clinical and Experimental Biochemistry

030 Clinical and Experimental Pharmacology

037 Drug Literature Index

LA Chinese

SL English; Chinese

ED Entered STN: 28 Nov 2005

Last Updated on STN: 28 Nov 2005

AB Aim: To observe the effects of Yigu capsule drug-containing serum on

osteoprotegerin mRNA in rats' osteoblasts cultured in vitro.

Methods: The

experiment was carried out in the Cell and Protein Engineering Laboratory,

College of Life Science Technology, Jinan University from May 2004 to

February 2005. Twenty male 12-month-old SD rats were randomly divided into two groups: traditional Chinese medicine (Yigu capsule, which consisted of 8 Chinese herbs, such as epimedium, prepared

rehmannia, wolfberry fruit, achyranthes root, etc.) group (n = 10) and

distilled water control group (n = 10). The drug-containing serum and control serum were prepared with the method of gastric perfusion, and the osteoblasts in skull of new-born rats were separated and cultured. After passage, they were randomly divided into drug-containing serum group (n = 8) and control

serum

group (n = 8), and then the relative expression value of osteoprotegerin

mRNA in osteoblasts were determined with the technique of reverse transcription-polymerase chain reaction specific electrophoresis strap at

24 and 48 hours of culture respectively, and the concentration of osteoprotegerin in supernatant fluid (end concentration of 200 mL/L) was

detected with enzyme-linked immunosorbent assay at 48, 72 and 96 hours of

culture respectively. Results: No rat died in both groups (n = 10

respectively), and the taken serum was normally used for cell cultivation.

1 Four hours after inoculation, stick to wall and extension of osteoblasts

were observed. With the prolongation of culture, the osteoblasts extended

more processus, the shape was mononuclear, polygon and fusiform shapes;

Two days after cultivation, almost all the osteoblasts stuck to wall, the shapes were mainly polygon or fusiform; About 6 days after cultivation, the osteoblasts stuck to almost the complete wall of the bottle, arranged like slabstone; Overlapped growth occurred after the spread of single layer in the culture bottle, the passage cells began to mineralize and nod at about 15 days. 2 Specific electrophoresis strap showed that the expressions of osteoprotegerin mRNA in osteoblasts 24 and 48 hours after cultivation were higher in the Yigu capsule drug-containing serum than in the blank serum[(0.196 ± 0.015, 0.236 ± 0.016), (0.152 ± 0.018, 0.206 ± 0.022), P < 0.01]. 3 The expressions of osteoprotegerin protein in osteoblasts 48, 72 and 96 hours after cultivation were obviously higher in the Yigu capsule drug-containing serum (end concentration of 200 mL/L) than in the blank serum[(0.123 0 ± 0.012 8, 0.168 1 ± 0.013 0, 0.198 3 ± 0.018 6), (0.106 7 ± 0.010 6, 0.138 5 ± 0.012 6, 0.158 8 ± 0.012 1), P < 0.01 or P < 0.05]. Conclusion: Yigu capsule drug-containing serum can promote the expression of osteoblasts, indicating that Yigu capsule has the role in inhibiting the link of bone resorption by its influence on osteoblasts, but whether it plays a role in other signal pathways still needs to be investigated.

L10 ANSWER 11 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on

STN

DUPLICATE 1

AN 2005:543071 BIOSIS

DN PREV200510326365

TI Viability of human chondrocytes in an ex vivo model in relation to

temperature and cartilage depth.

AU Drobnic, M. [Reprint Author]; Mars, T.; Alibegovic, A.; Bole, V.; Balazic,

J.; Grubic, Z.; Brecelj, J.

CS Univ Ljubljana, Ctr Med, Dept Orthopaed Surg, Zalonska 9, SI-1000 Ljubljana, Slovenia

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SO Folia Biologica (Prague), (2005) Vol. 51, No. 4, pp. 103-108. CODEN: FOBLAN. ISSN: 0015-5500.

DT Article

LA English

ED Entered STN: 1 Dec 2005

Last Updated on STN: 1 Dec 2005

AB Chondrocytes in human articular cartilage remain viable post-mortem. It

has however not been established yet how the storage temperature affects

their survival, which is essential information when post-mortem cartilage

is used for toxicologic studies. Our aim was to construct a simple model

of explanted knee cartilage and to test the influences of time and

temperature on the viability of chondrocytes in the ex vivo conditions.

Osteochondral cylinders were procured from the cadaveric femoral condyles.

The cylinders were embedded in water-tight rubber tubes, which formed separate chondral and osteal compartments. Tubes were filled with normal saline, without additives, to keep chondrocytes under

close-to-normal conditions. The samples were divided into two groups stored at 4 degrees C and 35 degrees C, respectively.

Three

samples of each of these two groups were analysed at the time of removal,

and then three and nine days later. Images of Live-Dead staining were

scanned by a confocal laser microscope. Count of viable chondrocytes in

four regions, from surface to bone, was obtained using image analysis software. The regression model revealed that the number of

viable chondrocytes decreased every day by 19% and that an increase in

temperature by 1 degrees C decreased their viability by 5.8%.

The

temperature effect fell by 0.2 percentage points for every 100 gin from

the surface to the bone. Herein we demonstrate that

chondrocytes remain viable in the ex vivo model of human knee cartilage

long enough to be able to serve as a model for toxicologic studies. Their

viability is, however, significantly influenced by time and temperature.

L10 ANSWER 12 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on

STN

AN 2005:480925 BIOSIS

DN PREV200510267510

TI Volume localized in vivo proton MR spectroscopy of multiple myeloma:

Variation of water-fat ratio in patients receiving chemotherapy correlates with clinical response.

AU Oriol, Albert [Reprint Author]; Valverde, Daniel; Capellades, Jaume;

Cabanas, Miquel; Arus, Carles; Ribera, Josep-Maria

CS Hosp Germans Trias and Pujol, ICO, Badalona, Barcelona, Spain

SO Blood, (NOV 16 2004) Vol. 104, No. 11, Part 2, pp. 298B.

Meeting Info.: 46th Annual Meeting of the

American-Society-of-Hematology.

San Diego, CA, USA. December 04 -07, 2004. Amer Soc Hematol.

CODEN: BLOOAW. ISSN: 0006-4971.

DT Conference; (Meeting)

Conference; Abstract; (Meeting Abstract)

LA English

ED Entered STN: 16 Nov 2005

Last Updated on STN: 16 Nov 2005

AB Introduction. Bone marrow magnetic resonance (MR) imaging provides important information in the evaluation of patients with multiple

myeloma (MM) but MR assessment of response to therapy is highly subjective. Proton nuclear magnetic resonance spectroscopy (H-1 MRS) may

be able to measure the ratio of lipid to water resonance signal intensities (LWR) and thus reflect the relative percentages of cellular

and fatty bone marrow within a defined three-dimensional volume (voxel). These measurements could be used to quantify the degree of

cytoreduction in MM patients. Patients and Methods. Twenty-one consecutive

patients (10 males median age 65 years, range 44-82) with newly diagnosed

multiple myeloma underwent a MR exploration of the fifth lumbar vertebral

body before the initiation of treatment. Patients completing therapy were

reevaluated. Dorso-lumbar imaging studies were carried out in a 1.5T

system with a sagittal spin-echo T1-weighted sequence (TR 437 ms / TE 15

ms). A 2-cm-thick transverse center section of the L5 lumbar vertebral

body was sampled to place the voxel. Spectroscopic data were acquired

with a stimulated echo acquisition mode (STEAM) sequence without water suppression with repetition time 5 s and echo time 40 ms.

To calculate the area of the water signal, the peak was fit to a single Lorentzian curve centered at 4.75 ppm. The area of the

lipid

resonances was fit to 3 Lorentzian curves centered at 0.89

(-CH3), 1.34 and

2.2 (-CH₂) ppm. The areas obtained were used to calculate the LWR for each voxel. The LWR was defined as the sum of the area of the 3 lipid fitted resonances divided by the area of the fitted water resonance. Results. The spectra showed a water peak and a compounded lipid peak separated by approximately 3.1 ppm. LWRs ranged from 0 to 15 (mean 1.748, SD 3.741). Seven patients were treated with melphalan and prednisone (MP) and 14 received 3 cycles of vincristine, BCNU, cyclophosphamide, melphalan and prednisone alternating with 3 cycles of vincristine, BCNU, doxorubicin and dexametasone (VBCMP/VBAD). Therapy was interrupted for at least 4 weeks before the MR evaluation. Two patients under MP could not be reevaluated. One patient under VBCMP/VBAD suffered extensive L5 collapse that invalidated a second MR study. Four patients progressed under treatment and only 1 of them could be re-submitted to MR. A patient who achieved a partial response after VBCMP/VBAD refused to undergo a MR re-evaluation. Pre and post treatment MR studies were available in 14 patients (progression 1, no response 3, partial response 3, complete response 7). LWR increased in 11/14 patients (78%) (p=0.034). However, 7/7 (100%) complete responders presented a LWR increase (p=0.018) while only 4/7 (57%) non-responders did. No significant differences were observed among partial responders or patients non-responding or progressing. Conclusions. Changes in LWR as assessed by H-1 NMR correlated with response to chemotherapy in patients with multiple myeloma, thus this technique may be used to measure noninvasively the response to treatment in these patients.

L10 ANSWER 13 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN

AN 2003:356706 BIOSIS
DN PREV200300356706

TI Direct Measurement of B-CLL Cell Production and Turnover In Vivo.

AU Messmer, Davorka [Reprint Author]; Messmer, Bradley T. [Reprint Author];

Cesar, Denise [Reprint Author]; Albesiano, Emilia [Reprint Author];

Telusma, Gloria [Reprint Author]; Damle, Rajendra [Reprint Author]; Allen,

Steven L. [Reprint Author]; Kudulkar, Prasad [Reprint Author]; Kolitz,

Jonathan E. [Reprint Author]; Loscalzo, John [Reprint Author]; Ho, Cuong

[Reprint Author]; Rai, Kanti R. [Reprint Author]; Hellerstein, Marc

[Reprint Author]; Chiorazzi, Nicholas [Reprint Author]

CS Experimental Immunology, North Shore LIJ Research Institute, Manhasset,

NY, USA

SO Blood, (November 16 2002) Vol. 100, No. 11, pp. Abstract No. 634. print.

Meeting Info.: 44th Annual Meeting of the American Society of Hematology.

Philadelphia, PA, USA. December 06-10, 2002. American Society of Hematology.

CODEN: BLOOAW. ISSN: 0006-4971.

DT Conference; (Meeting)

Conference; Abstract; (Meeting Abstract)

Conference; (Meeting Poster)

LA English

ED Entered STN: 6 Aug 2003

Last Updated on STN: 6 Aug 2003

AB Classically, B-CLL is considered a disease that results from the progressive accumulation of a functionally inert and slowly dividing B cell clone. The rate and extent of this accumulation appears to affect clinical course and outcome, and in vitro data suggest

that the major reason for cellular accumulation is a defect in apoptosis.

However, there have been very few in vivo studies of B-CLL cell kinetics

to support these notions, primarily because the labels used to quantify

such measurements can be toxic to humans (e.g., 3H-dT or BrdU).

We have

employed a non-radioactive, stable isotopic labeling technique that

utilizes heavy water (2H2O) to mark the DNA of newly generated cells. This approach has enabled us to follow the in vivo

kinetics of

B-CLL cells and polymorphonuclear leukocytes (PMNL) during a 12 week

labeling period and a 12-16 week washout period. Labeled PMNL reached a

plateau at 4 weeks and were absent by week 20. This rapid influx of

labeled PMNL and rapid washout after discontinuance of 2H2O is consistent

with the short transit time of PMNL from the bone marrow through the blood and to solid tissue. Since the PMNL completely turn over within

4 weeks, the amount of ²H incorporation in their DNA after that period

serves as an internal reference for the maximum percentage of ²H incorporation attainable within each patient. In the majority of patients, incorporated label was observed in the CD19+ CD5+ cell compartment after 2 weeks. For patients in whom the absolute lymphocyte

count (ALC) does not change appreciably over the labeling period, the

number of new cells produced must equal the number of cells lost. Those

patients that showed a rapid appearance of labeled cells without a

significant change in ALC surprisingly had up to 5% of the clone replaced

per week. In these cases, the extrapolated half lives for the B-CLL cells

ranged from approx 10 - 20 weeks. In addition, in at least one case there

was a clear delay in the appearance of labeled cells followed by continued

increase in the percentage of labeled cells 4 months beyond the end of the

labeling period. This suggests that, in this patient, the cells were born

and retained in a separate compartment from the peripheral blood (e.g., bone marrow or lymph node or spleen) and were slowly released into the periphery. The results indicate a dynamic

interplay

between proliferation and death in B-CLL cases with stable as well as with

increasing ALC. The surprisingly high level of new cell entry into the

peripheral pool indicates that the turnover rate of leukemic cells is

higher than might have been assumed. Since in those cases with stable

ALC, the proliferative rate equals the death rate, the degree of leukemic

cell death must also be more significant than assumed. For those patients

in whom the ALC varies over time, we are now able to determine, in an

individual patient, whether these changes are due to alterations in either

the proliferative or death rates. This approach should help to understand

differences the in vivo biology of B-CLL cells among different patients,

and possibly to identify subgroups of patients based on these kinetics.

Such analyses may be valuable in prognosis as well as in the choice of chemotherapeutic agents.

L10 ANSWER 14 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN

AN 2001:53319 BIOSIS

DN PREV200100053319

TI Nasal encephaloceles.

AU Hoving, Eelco W. [Reprint author]

CS Department of Neurosurgery, University Hospital Groningen, Hanzeplein 1, 9700 RB, Groningen, Netherlands
e.w.hoving@nchir.azg.nl

SO Child's Nervous System, (November, 2000) Vol. 16, No. 10-11, pp. 702-706.

print.

ISSN: 0256-7040.

DT Article

LA English

ED Entered STN: 24 Jan 2001

Last Updated on STN: 12 Feb 2002

AB Nasal encephaloceles can be divided into frontoethmoidal and basal encephaloceles. Both conditions are very rare, but frontoethmoidal

encephaloceles show a relatively high incidence (1:5,000) in Southeast

Asia. The pathogenesis of encephaloceles may be explained by a disturbance in separation of surface ectoderm (epithelial layer) and neurectoderm (nervous tissue) in the midline just after closure of the

neural folds. It should be regarded as a 'late' neurulation defect taking

place during the 4th gestational week. Apoptosis appears to be related to

this separation process. Frontoethmoidal encephaloceles can be recognized as a facial mass covered with normal skin, while basal encephaloceles may cause nasal obstruction or symptoms related to herniation of basal structures. Diagnostic CT or MR imaging delineates

the anatomy of the herniated mass. Therapy for frontoethmoidal encephaloceles consists in excision of the cele, water-tight closure of the dural defect and reconstruction of the skull defect. Basal

encephaloceles may harbour vital herniated structures which should be

saved. Hydrocephalus should be dealt with first, followed by elective

single-stage reconstructive surgery. The prognosis appears to be better

for patients with frontoethmoidal encephaloceles than for patients with occipital or parietal encephaloceles, and it depends largely on the presence of additional congenital anomalies of the brain. The differential diagnosis of a nasal mass must include nasal glioma, dermoid cyst, and nasal polyp.

L10 ANSWER 15 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on

STN

DUPLICATE 2

AN 1999:222212 BIOSIS

DN PREV199900222212

TI Dosimetry of hip irradiation for the prevention of heterotopic bone formation after arthroplasty.

AU Evans, Michael D. C. [Reprint author]; Patrocinio, Horacio J.; Souhami,

Luis; Tanzer, Michael; Podgorsak, Ervin B.

CS McGill-Medical Physics Unit, Montreal General Hospital, 1650 Avenue Cedar,

Montreal, PQ, H3G 1A4, Canada

SO International Journal of Radiation Oncology Biology Physics, (March 5,

1999) Vol. 43, No. 5, pp. 1161-1165. print.

CODEN: IOBPD3. ISSN: 0360-3016.

DT Article

LA English

ED Entered STN: 7 Jun 1999

Last Updated on STN: 7 Jun 1999

AB Purpose: The dosimetry of hip irradiation for the prevention of heterotopic bone formation following arthroplasty is complicated by the use of custom shielding in the treatment portal, and the fact that

irradiation is usually required during a 48 hour period following surgery.

Both the machine output and depth dose factors of the resulting fields are

modified by the presence of the shielding blocks. A simplified dosimetric

approach, based on correction factors for both the output and depth dose

as a function of field geometry is presented for various megavoltage

energy beams. Materials and Methods: Measurements of relative dose

factors (RDF) and percentage depth dose (PDD) were carried out for

different combinations of field size, block size and separation between adjacent blocks. Both RDF and PDD measurements were made in a

water phantom. Ratios of RDF and PDD were obtained by

dividing individual measurements or curves by the corresponding values for the open field (i.e., without blocks). The average values of these ratios constitute the correction factors to be applied for a given MU or treatment time calculation. Results: Extensive RDF and PDD measurements reveal that for the field and block dimensions of interest the correction factors for RDF can be parameterized as a function of separation between two adjacent blocks and beam energy alone and the depth correction factors are additionally only a function of depth. The correction factors for depth dose are equally valid for fixed source-skin distance techniques (that use PDD) and fixed source-axis distance techniques (that use TMR). Conclusion: A simple model for the calculation of output in hip irradiation is presented for the situation where the use of computer-based algorithms may not be practical. The model accurately predicts the RDF of the treatment portal to within 2% and the PDD to within 2% for the range of field sizes, block sizes, block gaps and beam energies of interest ignoring other variables.

L10 ANSWER 16 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on

STN

DUPLICATE 3

AN 2000:119397 BIOSIS

DN PREV200000119397

TI Importance of bioavailable calcium drinking water for the maintenance of bone mass in post-menopausal women.

AU Costi, D. [Reprint author]; Calcaterra, P. G.; Iori, N.; Vourna, S.;

Nappi, G.; Passeri, M.

CS Istituto di Clinica Medica Generale e Terapia Medica, Via Gramsci 14, 43100, Parma, Italy

SO Journal of Endocrinological Investigation, (Dec., 1999) Vol. 22, No. 11, pp. 852-856. print.

CODEN: JEIND7. ISSN: 0391-4097.

DT Article

LA English

ED Entered STN: 29 Mar 2000

Last Updated on STN: 3 Jan 2002

AB The aim of this research was to establish the importance of calcium intake through mineral water on vertebral bone density in

women. To this purpose, we examined 255 women divided into two groups: those regularly drinking a high calcium content mineral water (group A; number=175) and those using different type of water with a lower calcium content (group B; number=80). Their dietary daily calcium intake was determined by means of a validated questionnaire (N.I.H. Consensus statement) and vertebral bone density was measured by Dual-Energy X-ray absorptiometry (Unigamma-plus ACN densitometer). Women in group A ingested a significantly higher quantity of calcium in water than women in group B (mean difference 258 mg; 95% confidence limits: 147-370 mg). The average bone density values were slightly but significantly higher in group A as compared to group B (mean \pm -SD: 1.044 \pm 0, 15 vs 1.002 \pm 0, 14; p=0.03). In addition to age, BMI and menopausal status, calcium intake was a significant predictor of spinal BMD. These 4 variables explained about 35% of the spinal BMD variance. When the analysis was repeated separately for pre- and post-menopausal subjects, calcium remained a significant predictor in post-menopausal women (t=2.28; p=0.02), but not in premenopausal women. These results underline the importance of a lifelong daily calcium intake, resulting by the regular drinking of high bioavailable calcium water, in order to maintain bone mass after the menopause, in comparison to the use of a lower content calcium water.

L10 ANSWER 17 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1996:464543 CAPLUS

DN 125:96050

OREF 125:17899a,17902a

TI Process for the separation of lipids from biological materials

IN Hiltunen, Raimo Vilho Kari; Vuorela, Heikki Juhani

PA Helsinki University Licensing Ltd. Oy, Finland

SO PCT Int. Appl., 22 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.
DATE	-----	----	-----	-----

PI WO 9616712 A1 19960606 WO 1995-FI645
 19951122
 W: AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK,
 EE, ES,
 FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS,
 LT, LU,
 LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD,
 SE, SG,
 SI, SK
 RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB,
 GR, IE,
 IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN,
 ML, MR,

NE, SN, TD, TG
 US 5759549 A 19980602 US 1994-345039
 19941125
 AU 9539303 A 19960619 AU 1995-39303
 19951122
 EP 793523 A1 19970910 EP 1995-937097
 19951122
 EP 793523 B1 19980923
 R: AT, BE, CH, DE, DK, ES, FR, GB, LI, NL, PT, SE
 AT 171384 T 19981015 AT 1995-937097
 19951122
 FI 9702161 A 19970723 FI 1997-2161
 19970521
 FI 104619 B1 20000315
 PRAI US 1994-345039 A 19941125
 WO 1995-FI645 W 19951122

AB Materials and methods are presented for the isolation of lipids from a

mixture of lipids in biol. materials using a supercrit. fluid extraction process.

Lipids are isolated by methods according to the invention in an amount

approx. equal to the amount of the specified material in the mixture prior to

extraction Thus, from heat sterilized and freeze-dried tissue such as brain or

bone marrow from pig, reindeer, cow, or other similar animals, lipids first are extracted with a mixture of ethanol-diethylether (4:1,

volume/volume). The solvent is then evaporated and the lipids are dissolved in

acetone. Lipids are then adsorbed from the acetone solution onto finely

divided silica, and the acetone filtered off. The ratio of lipids

to adsorbent material may vary within wide limits, from approx. 15% to

approx. 75% by weight A suitable amount in the case of silica of the particle

size and diameter employed is approx. 30% by weight The
obtained adsorbent
material with adsorbed neurolipids is then charged into an
extraction vessel
and supercrit. CO2 is then fed into the extraction vessel from
below. In the
present example, the extraction vessel containing the adsorbent
material is
operated at a temperature of 65-75 °C and a pressure of about
600 bars,
under which conditions the neutral lipids were removed almost
quant. from
the adsorbent material. After passing through the extraction
vessel, the gas
passes to a separation vessel where its pressure is reduced to
atmospheric pressure.
Under such conditions, the gas volatilizes and the neutral
lipids are
separated The resulting lipids are than removed from the
separation vessel. The
adsorbent material with adsorbed phospholipids and glycolipids
in pure
form may be recovered through a valve at the bottom of the
extraction chamber.
Lipids thus obtained may be suitable for use as pharmaceuticals
or
nutritional additives.

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 18 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson
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STN

DUPLICATE 4

AN 1996:230298 BIOSIS

DN PREV199698794427

TI Evaluation of multidrug resistance phenotype in acute leukemia by
determination of nuclear efflux of tetrahydropyranyl-doxorubicin
using
confocal laser microspectrofluorometry.

AU Morjani, H.; Pignon, B.; Vilque, J. P.; Millot, J. M.; Lartigue,
B.;

Simon, G.; Etienne, J. C.; Potron, G.; Manfait, M. [Reprint
author]

CS Laboratoire de Spectroscopie Biomoléculaire, UFR de Pharmacie,
51096 Reims
Cedex, France

SO Annales de Biologie Clinique, (1996) Vol. 54, No. 1, pp. 9-15.
CODEN: ABCLAI. ISSN: 0003-3898.

DT Article

LA French

ED Entered STN: 28 May 1996

Last Updated on STN: 11 Jul 1996

AB Confocal microspectrofluorometry allows the analysis of fluorescence molecules such as anthracyclines in isolated living cells. An optical microscope fitted with a phase-contrast 100 X water-immersion objective enables simultaneous observation of the sample, focusing of the laser beam on the selected cell fraction (nucleus) and collection of the fluorescence emitted from the sample. The resulting intranuclear spectra are interpreted according to a quantitative model of the fluorescence spectra of both free and DNA-bound anthracycline. The intranuclear drug concentration can thus be determined. This technique has been applied to blast cells collected in patients with acute leukemia. Leukemic cells are aspirated from bone marrow, separated by Ficoll sedimentation and resuspended in RPMI-1640 containing 10% fetal calf serum and 200 nM tetrahydropyranyl-doxorubicin (THP-DOX). After one hour, 20 cells are analyzed and the mean nuclear drug content is determined (C-1). Cells are then resuspended in the same medium but without anthracycline for 3 hours and the mean intranuclear drug concentration is then also determined (C-3). From C-1 and C-3 the retention rate (RR) is calculated. Firstly, the accuracy of the method was checked. In 4 AML patients, two different samples aspirated on the same day were divided into two portions. Thus, two measurements were made on each one (4 values per patient). Coefficients of variation were satisfactory (4, 6, 12, and 12%). Secondly, blast cells collected in patients with AML and ALL at diagnosis or in relapse were studied. P-glycoprotein (P-gp) and CD34 expression was also studied using respectively immunohistochemistry and flow cytometry. Results obtained from the first 21 patients showed that there was no correlation between RR and either P-gp or CD34 expression. This could result from the efflux of THP-DOX by other mechanisms and/or low sensitivity of the staining technique.

L10 ANSWER 19 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson
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STN

DUPLICATE 5

AN 1995:202265 BIOSIS

DN PREV199598216565

TI The Accuracy of Volumetric Bone Density Measurements in Dual
X-Ray Absorptiometry.

AU Sabin, M. A.; Blake, G. M. [Reprint author]; MacLaughlin-Black,
S. M.;

Fogelman, I.

CS Dep. Nuclear Med., St. Thomas Street, Guy's Hosp., London SE1
9RT, UK

SO Calcified Tissue International, (1995) Vol. 56, No. 3, pp.
210-214.

CODEN: CTINDZ. ISSN: 0171-967X.

DT Article

LA English

ED Entered STN: 23 May 1995

Last Updated on STN: 23 May 1995

AB New developments in dual x-ray absorptiometry (DXA) allow the
performance

of high precision anteroposterior (AP) and lateral scans of
spinal

bone mineral density (BMD, units: g/cm²) without the patient
moving from the supine position. Data from both projections may
be

combined to give an estimate of the true volumetric bone mineral
density (VBMD, units: g/cm³) of the lumbar vertebral bodies.

This report

presents a cadaver study designed to validate DXA measurements of
volumetric bone density. Sections of whole lumbar spine were
scanned in AP and lateral projections in a water tank to
simulate soft tissue. Individual vertebrae were then divided to
separate the vertebral body from the neural arch, and vertebral
body volume was measured using the displacement of sand. The

bone

mineral content (BMC) of vertebral bodies and neural arches was
measured

by ashing at 250 degree C for 60 hours followed by 500 degree C
for a

further 24 hours. The results showed that DXA scanning
systematically

underestimated ashing data by 14% for AP BMC, 33% for vertebral
body BMC,

23% for vertebral body volume, and 12% for VBMD. Despite these
significant systematic errors, the DXA measurements and ashing
values were

highly correlated ($r = 0.979-0.992$). The results suggested that
after

allowing for the systematic errors, lateral DXA parameters
related closely

to true BMC, volume, and VBMD.

L10 ANSWER 20 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson
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STN

DUPLICATE 6

AN 1991:160840 BIOSIS

DN PREV199191086640; BA91:86640

TI MECHANISM OF CLASTOGENIC AND CO-CLASTOGENIC ACTIVITY OF
CREMOPHORE WITH

BENZENE IN MICE.

AU AU W W [Reprint author]; ANWAR W; PAOLINI M; RAMANUJAM S;
CANTELLI-FORTI G

CS DEP PREVENTIVE MED COMMUNITY HEALTH, UNIV TEXAS MED BRANCH,
GALVESTON,
TEXAS 77550, USA

SO Carcinogenesis (Oxford), (1991) Vol. 12, No. 1, pp. 53-58.
CODEN: CRNGDP. ISSN: 0143-3334.

DT Article

FS BA

LA ENGLISH

ED Entered STN: 1 Apr 1991

Last Updated on STN: 2 Apr 1991

AB Cremophore E1 (CR), a frequently used solubilizer and emusifier
in the

pharmaceutical, cosmetic and animal-raising industries, is made
up of

ethylene oxide and castor oil. Since ethylene oxide has been
shown to be

a potent genotoxic agent, we have studied the clastogenic
activity of CR

and its coclastogenic activity with benzene (BZ) in mice. Male
CD1 mice

were divided into untreated, vehicle control and experimental
groups. Mice in the experimental groups were treated orally
with 0.03,

0.3 or 3% CR in water, 440 mg/kg BZ in olive oil, BZ plus the
three different doses of CR (1 h apart) or BZ plus 3% CR

separated

by 1, 3 and 5 h intervals. Mice were killed at 30 h after the
treatment

for the single-treatment groups and after the first treatment
for the

combined treatment groups. Bone marrow cells were harvested for
determination of micronuclei (MN) frequencies in polychromatic
erythrocytes (PCE). The presence of known genotoxic metabolites
of

benzene (phenol and trans,trans muconic acid) was quantitated in
collected

urine. The effect on hepatic cytochrome P450 isoenzyme
expression in

livers of treated mice were also analyzed. We found that CR did
not

induce any significant or dose-dependent increase in MN. However, CR enhanced the clastogenic activity of BZ in a dose-dependent manner (from 41.6 to 47.3, 60.5 and 67.1 MN/1000 PCE respectively; $P < 0.05$). The combined treatment showed an inverse time-dependent change in MN frequencies when CR was administered at 1, 3 and 5 h after BZ (41.6 to 67.1, 43.3 and 42.0 MN/1000 PCE respectively). The enhancement effect of CR is apparently due to its ability to induce significantly the cytochrome P450I family when CR was administered 1 h after treatment with BZ. However, no positive synergistic effect was observed when the combined treatment intervals were extended to 3 and 5 h. Enhanced induction of these isoenzymes is correlated with increased metabolic activation of BZ to excrete increased amounts of trans,trans muconic acid, the putative active metabolite of BZ, in urine. Our integrated study demonstrates that an apparently innocuous agent that is consumed by the general population can enhance the genotoxic activity of a ubiquitous environmental carcinogen. The potential existence of this type of interaction in our daily lives is frequently overlooked and should be investigated.

L10 ANSWER 21 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN

AN 1985:223155 BIOSIS

DN PREV198579003151; BA79:3151

TI GROWTH OF INDICATOR PATHOGENIC AND PSYCHROTROPHIC BACTERIA IN MECHANICALLY

SEPARATED BEEF LEAN GROUND BEEF AND BEEF BONE MARROW.

AU RAY B [Reprint author]; JOHNSON C; FIELD R A

CS ANIMAL SCI DIV, BOX 3354, UNIVERSITY STN, UNIV WYOMING, LARAMIE, WYOMING

82071, USA

SO Journal of Food Protection, (1984) Vol. 47, No. 9, pp. 672-677. CODEN: JFPRDR. ISSN: 0362-028X.

DT Article

FS BA

LA ENGLISH

AB Growth of Escherichia coli, Salmonella anatum, Staphylococcus aureus,

Clostridium perfringens and naturally occurring psychotrophs in

mechanically separated beef (MSB), lean ground beef (LGB) and beef bone marrow (BBM) was studied. Six good grade steers were slaughtered and samples of MSB, LGB and BBM were prepared under proper sanitary care. Six hundred grams of each sample were collected; 100 g were used for chemical analysis. The remaining 500 g were divided into 10-g portions, each mixed with 10 ml of water and either frozen to -20° C or used immediately for bacteriological analysis.

For growth studies, samples were inoculated with *E. coli* or one of the pathogens, incubated at 37° C up to 24 h and enumerated for colony-forming units (CFU) on specific selective agar plates. During the first 8 h of incubation, *E. coli* and *S. anatum* multiplied rapidly in MSB and LGB but rather slowly in BBM. By 24 h, both species had multiplied to the same population level. Initial growth of *S. aureus* was rapid in MSB and LGB, but by 24 h its number was higher in LGB than in MSB or BBM. *C. perfringens* grew faster in LGB and slower in BBM during the 24-h period.

Growth of psychotrophs was determined by incubating the materials at 10°, 7° and 3° C up to 10 days. The psychotrophs grew fastest in MSB and slowest in LGB at all 3 temperatures, especially at 3° C. Rapid growth of various bacteria in MSB should be considered in its production, storage and subsequent use.

L10 ANSWER 22 OF 33 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights

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 AN 1979018777 EMBASE
 TI The effects of cancer therapy on the nervous system.
 AU Allen, J.C.
 CS Dept. Ped. Neurol., Mem. Sloan Kettering Cancer Cent., New York, N.Y.
 10021, United States.
 SO Journal of Pediatrics, (1978) Vol. 93, No. 6, pp. 903-909.
 ISSN: 0022-3476 CODEN: JOPDAB
 CY United States
 DT Journal; General Review; (Review)
 FS 016 Cancer
 030 Clinical and Experimental Pharmacology
 037 Drug Literature Index
 038 Adverse Reactions Titles
 007 Pediatrics and Pediatric Surgery

008 Neurology and Neurosurgery

LA English

AB Radiation therapy and chemotherapy are the two cytotoxic therapies

currently offered children with cancer. Rapidly dividing tissues, such as bone marrow and gastrointestinal cells, are most overtly affected by such therapy; the dose, in major degree, reflects

the tolerance of these organs to the various agents. Organs with less

proliferative activity, such as the CNS, seem less sensitive to the acute

toxic effects of radiation therapy and chemotherapy. The protective

effect of the blood brain barrier also serves to retard the penetration of

water soluble, ionized cytotoxic drugs. Several new factors in cancer therapy, however, combine to enhance the likelihood of CNS toxicity: drugs with high lipid solubility, such as the nitrosoureas, have

been introduced into many treatment protocols to maximize CNS penetration;

brain tumor protocols which incorporate several cytotoxic drugs concurrent

with radiation therapy may enhance their separate toxicities; children with all forms of cancer are surviving longer and relapses are

treated with more intensive cytotoxic regimens, many of which may affect

brain metabolism; and increased survival allows time for the development

and recognition of signs of CNS dysfunction. Knowledge of the deleterious

effects of the cytotoxic modalities on the CNS will guide the oncologist

in modifying dosages of individual agents and altering treatment schedules

to avert long term complications. There is increasing concern that

methotrexate in combination with radiation therapy may cause a chronic,

progressive encephalopathy initially described in acute lymphatic leukemia

patients receiving prophylactic cranial radiation therapy and long term

administration of methotrexate. Other agents may also be implicated in

this delayed type of CNS toxicity. A number of cytotoxic drugs such as

procarbazine, L-asparaginase, 5-fluorouracil, methotrexate, vincristine,

and the nitrosoureas can produce acute CNS reactions. In children, the

drugs that cause the most frequent and most serious morbidity are the vinca alkaloids, notably vincristine, and methotrexate. These agents are discussed here in detail.

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AN 1975200970 EMBASE

TI Effect of low dietary calcium on chronic cadmium toxicity in rats.

AU Washko, P.W.; Cousins, R.J.

CS Dept. Nutrit., Cook Coll., Rutgers Univ., New Brunswick, N.J. 08903,

United States.

SO Nutrition Reports International, (1975) Vol. 11, No. 2, pp. 113-127.

ISSN: 0029-6635 CODEN: NURIBL

DT Journal

FS 029 Clinical and Experimental Biochemistry

030 Clinical and Experimental Pharmacology

037 Drug Literature Index

LA English

AB Experiments were conducted with male rats to evaluate the relationship

between calcium intake and cadmium toxicity. Forty eight rats were

equally divided into four groups. Two groups were fed a purified diet containing 0.6% calcium (NC) and two groups were fed a 0.1%

calcium (LC) diet for an eight wk comparison period. One NC and one LC

group received 25 ppm cadmium (as CdCl₂) in the drinking water. Growth was depressed in the NC+Cd, LC and LC+Cd groups.

Hematocrit

values were decreased in the groups that received Cd. Bone ash content was decreased in the LC groups being lowest in the LC+Cd group.

Renal leucine aminopeptidase (LAP) activity was depressed in the LC+Cd

group while serum LAP activity was not affected. Cd was detected in

highest concentrations in liver and kidney of the LC+Cd groups.

The

amount of cadmium binding protein in the liver was closely correlated with

the level of liver cadmium. In a separate short term experiment utilizing larger rats fed the same diet, the uptake of oral

(109)Cd into

intestinal mucosa was greater and more radioactivity was associated with a

low molecular weight mucosal protein in the NC rats than the LC rats. The results collectively indicate the level of dietary calcium directly influences the uptake, deposition and toxic properties of ingested cadmium.

L10 ANSWER 24 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN

AN 1966:110290 BIOSIS

DN PREV19664700110293; BA47:110293

TI Cytochemical study of ascorbic acid in blood elements of healthy persons.

Original Title: Tsitokhimicheskoe izuchenie askorbinovoi kisloty v

elementakh krovi zdorovykh lyudei.

AU ESEDOV, E. M.

CS Dagestan Med Inst., Makhachkala, USSR

SO LAB DELO, (1966) Vol. 2, pp. 70-72.

DT Article

FS BA

LA Unavailable

ED Entered STN: May 2007

Last Updated on STN: May 2007

AB Ascorbic acid was determined cytochemically in blood and bone marrow cells by a modified Giroud-Leblond method. Dry, fresh, and unfixed

smears of peripheral blood and bone marrow were covered with a 10% solution of silver nitrate acidified with glacial acetic acid (pH

2.5-3.0). The smears were stained in the dark for 20 h, then washed with

distilled water, and dried in the dark. Ascorbic acid was demonstrated as black, very rarely brown, grains as in the Giroud-Leblond

method. The peripheral blood of 50 and bone marrow of 5 healthy persons was investigated. In smears on the peripheral blood 300 leukocytes were counted and in the smears of the bone marrow 500 cells. Since no more than 5-10 hemocytoblasts, myelo-blasts, and erythroblasts were found separately /500 bone marrow cells, up to 20 cells of each of these forms were counted in the smear for

a more accurate idea of the content of ascorbic acid in them.

The

cytochemical investigation revealed that ascorbic acid is contained in all

formed elements of the blood and is demonstrated as grains of various

sizes, most frequently in the nuclei. The leukocytes were arranged in the

following descending order with respect to the content of ascorbic aci[plus or minus] eosinophils, lymphocytes, neutrophils, and monocytes.

In dividing cells of the blood the content of ascorbic acid was normal or low. ABSTRACT AUTHORS: J. Slep

L10 ANSWER 25 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN

AN 1965:46419 BIOSIS

DN PREV19654600046425; BA46:46425

TI Clinical chemistry: Theory and practice.

Original Title: Klinische chemie: Theorie und Praxis.

AU RICHTERICH, R.

SO (1965) pp. 448p. Illus. Clinical chemistry: Theory and practice. Klinische

chemie: Theorie und Praxis.

Publisher: S. Karger AG, Basel, Switz.

DT Book

FS BA

LA Unavailable

ED Entered STN: May 2007

Last Updated on STN: May 2007

AB This well documented volume is divided into 4 parts and includes the following topic headings: Part A: Introduction includes:

General

principles; Units of measurement; Introduction to statistics;

Normal

values; The reliability of laboratory methods; Laboratory

apparatus;

Chemicals; The taking of blood; Collection of urine. Part B:

Methods of

laboratory determinations includes: General principles; Methods

of

separations; Gravimetric analysis; Volumetric analysis;

Absorption

photometry; Flame photometry; Enzyme determinations. Part C:

Metabolic

studies includes: General principles; Water and electrolyte

metabolism; Trace elements; Energy metabolism; Carbohydrate

metabolism;

Nitrogen metabolism; Lipid metabolism; Nucleic acid metabolism;

Vitamins;

Pharmacology and toxicology, Part I. Specific organ studies

includes:

Connective tissue; Bone; Skin; Skeletal muscle; Heart;

Circulation; Hematopoietic system; Respiratory organs;

Gastro-intestinal

tract; Pancreas and salivary glands; Liver diseases; Endocrine

glands;

Nervous system; Male genital organs; Kidneys; Female genital

organs;

Appendix including an index of chemicals, buffer solutions,
standard and
control solutions, test reagents, t-values for the "Student" t
test,
transmission and extinction values, normograms for determination
of body
surface area Subject index. ABSTRACT AUTHORS: J. G. Scully

L10 ANSWER 26 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson
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STN

AN 1939:12547 BIOSIS

DN PREV19391300012643; BA13:12643

TI Proceedings of the American Physiological Society. Fifty-first
annual
meeting.

AU ABRAMSON, DAVID I.; ZAZEELA, HERMAN; OPPENHEIMER, B. S.; Et al.

SO AMER JOUR PHYSIOL, (1939) Vol. 126, No. 3, pp. 417-660.

DT Article

FS BA

LA Unavailable

ED Entered STN: May 2007

Last Updated on STN: May 2007

AB Effect of smoking upon the vascular beds in skin and muscle, as
determined

by plethysmographic studies in man, by DAVID I. ABRAMSON,
HERMAN ZAZEELA,

and B. S. OPPENHEIMER; Protein intake and protein distribution
in the

organs and tissues of the body, by T. ADDIS; The signs of acute
anoxia in

man, by FREDERICK A. D. ALEXANDER, and H. E. HIMWICH; Signs
of

progressive acute Anoxia in man, by F. A. D. ALEXANDER,
BASILE LIPETZ,

and H. E. HIMWICH; Effects of amorphous, crystalline zinc and
protamine

zinc insulin in animals, by FREDERICK M. ALLEN; Studies on the
central

olfactory system based on the effects of brain lesions on
conditioned

reflexes in dogs, by WILLIAM F. ALLEN; Comparative actions of
optically

isomeric phenisopropyl-amines, by GORDON A. ALLES; Endocrine
factors in

intestinal absorption, by T. L. ALTHAUSEN, M. STOCKHOLM, and
E. M.

ANDERSON; Behavior of the sow in relation to the sex cycle, by
MARGARET

ALTMANN; Urinary excretion of radioactive sodium and potassium in
adrenalectomized rats with and without salt, by EVELYN ANDERSON,
and

MICHAEL JOSEPH; Two cases of experimental neurosis in dogs of known genetic constitution, by O. D. ANDERSON; The spontaneous neuro-muscular activity of various pure breeds of dog and of interbreed hybrids of the first and second generation, by O. D. ANDERSON; Gastric secretion in extragastric malignancy, by MAX APPEL, and H. NECHELES; The effect of sodium azide on the frequency of the embryonic fish heart, by C. W. J. ARMSTRONG, and KENNETH C. FISHER; Time relations in the cyclic release of ovarian hormones in the rat, by E. B. ASTWOOD; Splenic rhythm in relation to blood flow, by E. J. BALDES, J. H. GRINDLAY, and J. F. HERRICK; Relation of anterior and posterior hypo-thalamic nuclei to anhydremic responses to cold in monkeys, by HENRY G. BARBOUR; Analysis of iodoacetic acid effect on metabolism of isolated mammalian tissues, by S. B. BARKER, and E. SHORR; Observations on the adreno-genital-genital syndrome, by BRODA O. BARNES; A study of the effect of adrenalectomy and iodoacetic acid poisoning on the intestinal absorption of spectroscopically active fats, by RICHARD H. BARNES, ELMER S. MILLER, and G. O. BURR; Degeneration of the spino-cerebellar tracts in a leopard, by S. E. BARRERA, and F. H. PIKE; Effects of lesions at various levels of spino-cortical sensory system in the macacus rhesus, by S. E. BARRERA, and A. FERRARO; Monkeys with lesions of the sensory system at various levels (dorsal columns, dorsal column nuclei and post-central convolutions), by S. E. BARRERA, and A. FERRARO; The blood sugar level of the fasting domestic fowl, by H. T. BATT; Proof of fetal swallowing, gastrointestinal peristalsis and defecation in amnio, by R. F. BECKER, M. D. SCHULZ, and W. F. WINDLE; Autonomic responses in monkey and cat, by M. B. BENDER; Dietary bradycardia and sensitivity to ouabain in the dog, by A. L. BENNETT, J. C. BURKE, and A. R.

McINTYRE; The error of estimate of the blood cell count as made with the hemocytometer, by JOSEPH NERKSON, T. B. MAGATH, and MARGARET HURN; The elimination in the bile of orally administered bile acids, by A. L. BERMAN, E. SNAPP, and A. C. IVY; The efferent pathway of chemoreflex vasomotor reactions of carotid body origin, by THEODORE BERNTHAL, and HARRY E. MOTLEY; The determination of the excretion of beta phenylisopropylamine (benzedrine) by man, by KARL H. BEYER, and J. T. SKINNER; Oxygen consumption and blood flow in perfused organs, by RICHARD J. BING; B and C nerve fibers, by G. H. BISHOP, and JAMES L. O'LEARY; Oxygen transport by the blood of certain freshwater fish, by EDGAR C. BLACK, LAURENCE IRVING, and V. SAFFORD; The assay of parathyroid extract from the calcium serum of dogs, by C. I. BLISS, and C. L. ROSE; Photodynamic hemolysis, by HAROLD F. BLUM, JOHN L. MORGAN, and CHESTER HYMAN; Loss of hypersensitivity to insulin in hypophysectomized dogs, by R. C. De BODO, J. E. SWEET, A. E. BENAGLIA, and H. I. BLOCH; Gluconeogenesis in fasted hypophysectomized dogs, by R. C. De BODO, J. E. SWEET, A. E. BENAGLIA, and H. I. BLOCH; Liberation by light of a melanophore stimulating substance in the blood of mammals, by W. S. BOERNSTEIN; Effects of oxygen at high barometric pressure on some mammalian smooth muscle, by DAVID F. BOHR, and JOHN W. BEAN; Experimental acute yellow atrophy of the liver, by W. N. BOLDYREFF, and A. A. HUMPHREY; The effects of vanadium, manganese, and iron on the growth of *Chilomonas paramecium*, by WILLIAM J. BOWEN; Studies on vagal inhibition of inspiration, by T. E. BOYD, and C. A. MAASKE; Effects of intracoronary and intravenous injections of various drugs on the coronary blood flow, by NORMAN H. BOYER, R. WEGRIA, and HAROLD D. GREEN; Electrophysiological studies on intestinal motility, by E. BOZLER; Masculinization of the female rat by gonadotropic extracts, by JAMES T.

BRADBURY; Changes in pH and the rate of flow of saliva
 accompanying pH
 changes in arterial blood during chorda tympani stimulation and
 during
 pilo-carpine stimulation, by CHARLES R. BRASSFIELD, and CHARLES
 J. HONG;
 Factors determining the frequency of chemically initiated nerve
 impulses,
 by F. BRINK, T. SJOSTRAND, and D. W. BRONK; The glycopexic
 function of
 the adrenal cortex, by S. W. BRITTON; Experimental adrenal
 insufficiency
 in monkeys, by S. W. BRITTON, and E. L. COREY; The relation
 of the
 central nervous system to insulin sensitivity, by J. R.
 BROBECK; The
 elaboration of higher-order conditioned responses with food the
 constant
 incentive, by W. J. BROGDEN; Postural changes in respiration,
 by
 ELIZABETH BROGDON, and FRANCES A. HELLEBRANDT; The respiratory
 effects of
 localized faradic stimulation of the medulla oblongata, by JOHN
 M.
 BROOKHART; Pressure and the dynamic constants of muscle, by
 DUGALD E. S.
 BROWN; Respiratory muscle action potentials under low oxygen and
 high
 carbon dioxide, by RICHARD C. BROWN, A. KEARNEY ATKINSON, and
 ROBERT
 GESELL; The relation of heat production to water metabolism
 during the administration of metabolic stimulating substances,
 by JOHN M.
 BRUHN; Leucocytosis following parenteral administration of liver
 extracts,
 by H. D. BRUNER; The influence of gall-bladder distention on
 gastric
 hunger motility in the dog, by B. E. BRUSH, and T. L.
 PATTERSON;
 Effect of exercise and rest on electrical polarity, by E. L.
 BURGE, and
 W. E. BURGE; Demonstration of electrical polarity in the fish
 and in the
 human, by E. L. BURGE; Further study on the electrical theory
 of
 anesthesia, by W. E. BURGE; The role of silicate in cataract
 production,
 by W. E. BURGE; A comparison of the effect of exercise and
 rest on the
 threshold of the knee-jerk and electrical potential, by W. E.
 BURGE;
 Experimental intersexuality: Correlation between treatment and
 degree of

masculinization of genetic female rats, by M. W. BURRILL, and
 R. R. GREENE; Rhythmic fluctuations of sympathetic tone and their
 modification
 by temperature and by psychic influences, by A. C. BURTON, and
 R. M. TAYLOR; Plasma protein changes following intravenous saline
 administration, by D. BAILEY CALVIN; The effect of
 intra-arterially
 injected adrenalin on blood flow, oxygen utilization and carbon
 dioxide
 output of the intact hind leg of chloralose anesthetized cats,
 by LEONARD CAMMER, and FRED R. GRIFFITH Jr.; Further observations on dogs
 made
 permanently diabetic by the administration of extracts of the
 anterior
 pituitary gland, by JAMES CAMPBELL, H. C. KEENAN, and C. H.
 BEST; The
 influence of upper urinary tract distention on gastric hunger
 motility in
 the dog, by K. N. CAMPBELL, and T. L. PATTERSON; The effect
 of
 jaundiced serum upon the pH sphaatase activity of normal serum,
 by A. CANTAROW; Ventricular rate in faradically induced auricular
 fibrillation,
 an index of A-V conductivity, by S. A. CARLEN; Studies on the
 permeability of the guinea-pig placenta to the foreign protein
 ricin, by
 EMMETT B. CARMICHAEL, and LOUIS C. POSEY; Human direct and
 indirect
 calorimetry with sugars, by THORNE M. CARPENTER, and EDWARD H.
 BENSLEY;
 Suppression of pituitary gonadotropic function by testosterone
 pro-pionate, by HUBERT R. CATCHPOLE, and JAMES B. HAMILTON;
 Carbohydrate
 metabolism in adrenalectomized depancreatized dogs, by WILLIAM
 H. CHAMBERS. J. E. SWEET, J. P. CHANDLER, and A. L.
 LICHTMAN; Visual
 purple regeneration, by AURIN M. CHASE, and EMIL L. SMITH;
 Distribution
 of metabolites in the body, by JANE L. CHIDSEY, and J. A. DYE;
 Utilization of acetoacetate, by JANE L. CHIDSEY, and J. A.
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 action of proteolytic enzymes on anterior pituitary extract, by
 BACON F. CHOW, R. O. GREEP, and H. B. VAN DYKE; The relation of the
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 adrenalectomy, by WILLIAM G. CLARK, and EATON M. MACKAY; Changes in
 intestinal volume of cats in adrenal insufficiency produced by pressor
 drugs and splanchnic nerve stimulation, by R. A. CLEGHORN, J. L. A.
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 body of the cat, by JOHN D. AB COAKLEY, and E. A. CULLER; Experiments on the interaction of
 hypoglycemia and anoxia, by ANN COFFEE, and ERNST GELLHORN; Anaerobic
 glutamic acid formation in different tissues, by PHILIP P. COHEN;
 Electrical impedance of the squid giant axon during activity, by KENNETH
 S. COLE, and HOWARD J. CURTIS; Membrane resistance of the squid giant
 axon at rest, by KENNETH S. COLE, and ALAN L. HODGKIN; The respiratory
 and cardio-vascular response to repeated occlusions of the head arteries
 in nem-butalized cats, by HELEN C. COOMBS; The effects of renin and
 pitressin on renal blood flow and clearance, by A. C. CORCORAN, and
 IRVINE H. PAGE; Hypophyso-adrenal synergy and carbohydrate metabolism, by
 E. L. COREY; Epinephrine output in experimental hyper-thyroidism in
 dogs, by RUTH CORTELL, and J. M. ROGOFF; The effect of temperature on
 the electrical responses from the eyes of the grasshopper and moth, by
 FREDERICK CRESCITELLI, and THEODORE L. JAHN; Differential effects of
 curare in the central nervous system, by E. A. CULLER; Depression of
 gastric secretion by extracts of pregnancy urine, by C. U. CULMER, A.
 J. ATKINSON, and A. C. IVY; Intercortical connections of the corpus
 callosum as indicated by evoked potentials, by HOWARD J. CURTIS, and
 PHILIP BARD; The birth process in the monkey as revealed by frozen

sections, by D. N. DANFORTH, R. J. GRAHAM, and A. C. IVY;
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of adrenalin to the autonomic effects of metra-zol, by CHESTER
W. DARROW,
and ERNST GELLHORN; Analysis of the electrical response of the
human brain
to auditory stimulation during sleep, by H. DAVIS. P. A.
DAVIS, A. L.
LOOMIS, E. N. HARVEY, and G. HOBART; Depression of
experimental
polycythemia by choline hydrochloride, by JOHN EMERSON DAVIS; The
electrical response of the human brain to auditory stimuli, by
P. A.
DAVIS; Studies on the "melanophore" principle of the pituitary,
by O. F.
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irradiated animal brains, by A. J. DERBYSHIRE, and K. E.
CORRIGAN;
Vascular reactions in the nasal septum and skin of the head and
digits, by
JOHN B. DILLON, and ALRICK B. HERTZMAN; Further observations
on the
permanent diabetes produced by anterior pituitary extract, by F.
C.
DOHAN, and F. D. W. LUKENS; Studies on the elasticity of the
aorta, by
PHILIP DOW, and W. F. HAMILTON; Localization of cerebellar
cortical
potentials in response to stimulation of various afferent
connections, by
R. S. DOW; Arteriosclerosis in depancreatized dogs, by LESTER
R.
DRAGSTEDT, W. CARTER GOOD-PASTURE, C. VERMEULEN, and DWIGHT E.
CLARK;
Additional experiments relative to the origin of glycoside
emesis, using
cats and dogs, by M. DRESBACH; Further studies on aids to the
absorption
of insulin from the G-I tract, by R. L. DRIVER, and J. R.
MURLIN; The
rate of disappearance of insulin from the body, by D. R.
DRURY, and P.
O. GREELEY; Suppression of motor response upon stimulation of
area 4-s of
the cerebral cortex, by J. G. DUSSER DE BARENNE, and W. S.
McCULLOCH;
Total carbohydrate-acetone body utilization ratios with high
acetone body
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femoral and

carotid arteries, by RICHARD W. ECKSTEIN, and DONALD E. GREGG;
The work
done by muscles in walking, by HERBERT ELFTMAN; Degrees of
sterility in
female vitamin E-low rats, by GLADYS A. EMERSON, and HERBERT M.
EVANS;
The effect of splenectomy on gonadotropic hormones, by FREDERICK
E.
EMERY; The relative importance of toxemia in jejunal obstruction
in dogs,
by C. A. ENDER, and R. C. HERRIN; The influence of adult sex
hormones
on the differentiation of transplanted halves of embryonic
genital
primordia in the mouse, by E. T. ERICKSON; The effect of
certain drugs
on the coronary blood flow of the trained dog, by HIRAM E.
ESSEX, R. G.
E. WEGRIA, J. F. HERRICK. and F. C. MANN; A direct result
colimeter,
by R. S. ESTEY, and O. W. RICHARDS; The treatment of
pneu-mococcic
pneumonia with sulfapyridine, by EVERETT IDRIS EVANS, TRACY D.
CUTTLE,
and GARFIELD G. DUNCAN; Preservation of the seminiferous
epithelium and
of fertility in male rats by prophylactic administration of alpha
tocopherol, by HERBERT M. EVANS, GLADYS A. EMERSON, and OLIVER
H.
EMERSON; The sequence of onset of injury potentials on the
surface of the
dog and turtle ventricle, by J. A. E. EYSTER, WALTER J.
MEEK, HAROLD
GOLDBERG, and H. L. BARTSCH; The liver in relation to
movements of
potassium, by WALLACE O. FENN; The control of uterine motility
in the
puerperal rabbit, by J. K. W. FERGUSON; A stereotax
instrument for
placing stimuli or lesions in the brain, by J. K. W.
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coagulation, by JOHN H. FERGUSON, and B. NIMS ERICKSON; The
effect of
faradic and galvanic stimulation upon atrophying skeletal
muscle, by ERNST
FISCHER; The sensitivity of the oxygen consumption of yeast to
cyanide, by
KENNETH C. FISHER; Spinal reflexes in nicotin poisoning, by F.
E.
FRANKE; Effect of progressive sympathectomy on hypertension
produced by

increased intracranial pressure, by HORMAN E. FREEMAN, and WILLIAM A.

JEFFERS; The action of the dioxane derivative 933 F upon the blood

pressure and heart rate of the normal and hypertensive dog. by L.

FRIEDBERG, and L. N. KATZ; Induction of estrous behavior in anestrus

cats with FSH and LH, by HARRY B. FRIEDGOOD; The influence of glucose

administration on gastric secretion, by M. H. F. FRIEDMAN; Gastric

secretion in Necturus, by M. H. F. FRIEDMAN; The permeability of the

gastric glands to glucose, by M. H. F. FRIEDMAN, and J. L. IRVIN;

Progression of symptoms during the insulin treatment, by J. P. FROSTIG;

The aggravation of pancreatic diabetes by adrenal cortical extract, by E.

G. FRY, C. N. H. LONG, and H. B. RITTER; The influence of carbon

dioxide on the utilization of oxygen by certain species of fish in the

Toronto region, by F. E. J. FRY, and E. C. BLACK; Relation between

conditioned and unconditioned reflex: the factor of state of the organism

at the time of stimulation and of prolonged experimental repetitions, by

W. HORSLEY GANTT; The effect of stimulation on the fat and carbohydrate

content of the gastrocnemius muscle in the phlorizin-ized rat, by CHALMERS

L. GEMMILL; The effect of insulin on muscle glycogen in vitro, by

CHALMERS L. GEMMILL; Action of drugs on potentials of isolated frog

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The transplantation from tissue cultures and by direct homologous and

heterologous grafts of adrenal tissue to the eye of the adrenalectomized

rat, by GEORGE O. GEY, and ARTHUR GROLL-MAN; Cortical frequency spectra

in three dimensions, by F. A. GIBBS, and A. M. GRASS; Studies on rats

following the administration of estradiol benzoate, by H. GILDER, and R.

A. PHILLIPS; The electrical field on the surface of the active turtle

ventricle, by HAROLD GOLDBERG, and J. A. E. EYSTER; The effect of glucose and insulin on the disappearance of alcohol from the blood in man, by WALTER GOLDFARB, KARL M. BOWMAN, and SAMUEL PARKER; Motor conditioning in the goat, by MARVIN M. GOLDMAN; The influence of gum acacia on renal function, by A. GOUDSMIT, Jr., M. H. POWER, and J. L. BOLLMAN; Effects of polarization on the action potential of C fibres, by HELEN TREDWAY GRAHAM; The respiration of uterine tissue of the rabbit and immature rat, by MARK GRAUBARD, and GREGORY PINCUS; The presence of a gastric secretory depressant in normal urine, by J. S. GRAY, E. WIECZOROWSKI, and A. C. IVY; The composition of gastric juice as a function of the rate of secretion, by J. S. GRAY, and G. BUCHER; The effects of crustacean eye-stalk-hormone on the melano-phore size and water uptake in the frog, by STEPHEN W. GRAY, and WALTER E. FORD; Direct measurement of the phasic blood flow in coronary arteries, by HAROLD D. GREEN, and DONALD E. GREGG; Supplementary apparatus for optical registration, by HAROLD D. GREEN; A meter for measuring small blood flows of pulsatile streams, by HAROLD D. GREEN, and DONALD E. GREGG; Disappearance rate of tyrosine from blood and lymph following its intravenous administration, by JAMES A. GREENE, and GEORGE JOHNSTON; Experimental intersexuality: Modifications of embryonic sexual development obtained by giving large amounts of estrogens to the pregnant rat, by R. GREENE, and M. W. BURRILL; Absorption and oxidation of orally administered colloidal sulphur, by HARRY GREENGARD, and JEAN REA WOLLEY; Plasma volume and "available fluid" changes in dehydration, by MAGNUS I. GREGERSEN, and ELIZABETH PAINTER; The magnitude, adequacy and source of the collateral circulation in chronically occluded coronary arteries, by DONALD E. GREGG, JOHN THORNTON, and F. R. MAUTZ; The variable relationship between differential pressure and blood flow in a coronary

artery, by DONALD E. GREGG, and HAROLD D. GREEN; A constant pressure
 flow meter, by DONALD E. GREGG, and HAROLD D. GREEN; The blood
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 the spleen, by J. H. GRINDLAY, J. F. HERRICK, and F. C. MANN;
 Properties of mammalian preganglionic B fibers, by H. GRUNDFEST; The
 standardization of animals for glycogen determinations, by M. MASON
 GUEST, and RUTH A. RAWSON; The electrical impedance of muscle
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 action of sugar, inorganic cations and narcotics, by RITA GUTTMAN;
 Stabilization of nerve membranes by alkali earths, as manifested
 in
 resting potential measurements, by RITA GUTTMAN; Chemical
 pacemakers for
 alpha brain wave frequencies in general paresis, by ZAREH HADIDIAN, and
 HUDSON HOAG-LAND; Dark adaptation measurements with natural and
 constant
 pupillary apertures, by CHARLES HAIG; Diet and the insulin
 content of
 pancreas, by REGINALD E. HAIST, JESSIE H. RIDOUT, and C. H. BEST; The
 effects on the Ca and P balance and on various bodily
 constituents of the
 rat produced by an increase in the Ca and P content of the diet,
 by JOHN
 HALDI, GEORGE BACHMAN, WINFREY WYNN, and CHARLES EN-SOR;
 Influence of
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and J. S. L. BROWNE; Hypophysis and experimental diabetes insipidus, by H. L. WHITE, and PETER HEINBECKER; The effect of gastric juice, administered to the pregnant mother, on the erythrocytes of newborn rats,

by H. S. WIGODSKY, and T. A. NOBLE; Central and chemo-reflex influence of potassium excess on circulation and respiration, by CLAUDE V. WINDER;

Effect of pitressin injections upon the serum electrolytes and water exchange of cats with diabetes insipidus and adrenal insufficiency, by CHARLES A. WINTER, W. R. INGRAM, and E. G. GROSS;

Studies in pain sensation. II. The quantitative analysis of the action of analgesics, by H. G. WOLFF, J. D. HARDY, and H. GOODELL; Potassium exchanges between mammalian muscle and blood in relation to activity, by E. H. WOOD, D. A. COLLINS, and G. K. MOE; The proprioceptive drive of the respiratory act, by JOSEPH J. WORZNIAK, and ROBERT GESELL; Maximum blood flow in the human lower extremity, by GEORGE W. WRIGHT, and KENTON PHELPS; Relation of various groups of the adrenalin molecule to its smooth muscle inhibiting function, by W. B. YOUNG, and K. AUMANN; and Nucleoproteins from streptococcus pyogenes: some chemical and serological properties and changes in both caused by certain enzymes, by CHARLES A. ZITTLE.

DN PREV19391300014545; BA13:14545
 TI The comparative toxicity of fluorine in calcium fluoride and in cryolite.
 AU LAWRENZ, MARGARET; MITCHELL, H. H.; RUTH, W. A.
 SO JOUR NUTRITION, (1939) Vol. 18, No. 2, pp. 115-125.
 DT Article
 FS BA
 LA Unavailable
 ED Entered STN: May 2007
 Last Updated on STN: May 2007
 AB 12 pairs of growing rats were fed (paired-feeding) on a complete diet
 containing 3.04 p.p.m. of fluorine. The F supplements (Ca fluoride and cryolite) were fed in the drinking water in doses providing equal amounts of fluorine to pair mates; average for the entire experiment, 0.58 mg. of F per kg. of body weight daily. After 14 wks. of feeding, during which weekly examinations were made of the teeth, the rats were sacrificed, the carcasses dissected into bone, teeth and soft tissue samples and the 72 samples thus obtained were analyzed separately for F. No distinct effects between the F supplements tested were observed upon growth, food consumption, the time of appearance of tooth striations, nor the conc, of F in bones, teeth or soft tissues.
 At the levels fed, the F in CaF₂ and in cryolite (synthetic) seemed to be equally toxic and equally assimilable. During the exptl. feeding period, approximately 59% of the ingested F was retained in the bodies of the growing rats. About 96% of the F retained (at an intake equivalent to 13 p.p.m. of food consumed) was deposited in the skeleton, and the remaining 4% was about equally divided between teeth :and soft tissues.
 ABSTRACT AUTHORS: Auth. (courtesy Wistar Bibl. Serv.)

L10 ANSWER 28 OF 33 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on

STN
 AN 1936:6959 BIOSIS
 DN PREV19361000006974; BA10:6974
 TI Das Wachstum des Selachier-wirbels und seiner Gewebe.
 AU WURMBACH, H.
 SO ZOOL JAHRB ABT ANAT U ONTOG TIERE, (1932) Vol. 55, No. 1, pp. 1-136.
 DT Article
 FS BA
 LA Unavailable

ED Entered STN: May 2007

Last Updated on STN: May 2007

AB Development of the vertebra was studied in *Acanthias vulgaris*,
Raja sp.,

Galeus canis, *Scyllium canicula*, and *Pristiurus melanostomus*.

The

notochord is surrounded by an int. elastic membrane, layer of
collagenous

fibers, and an extracellular elastic membrane. The sclerotome is
composed of

syncytial reticulum in which cartilage formation begins by the
appearance

of cell walls between the nuclei in 4 places next the elastica
extracellular: the 2

basidorsals in the angles between notochord and spinal cord and
the 2

basiventrals around the caudal blood-vessels. Cells also invade
the

elastica extracellular and part of the fibrous sheath of the
notochord. Cart.

formation spreads in the 4 arches and in *Acanthias* the
basidorsals and

basiventrals fuse above and below respectively, while in
Pristiurus,

Scyllium, and *Galeus*, they remain separate. In early cartilage
formation there is much cell division but with increasing age,
divisions

decline and growth occurs chiefly by intussusception in which the
cart.

cells increase 350 times in volume The basidorsals,
basiventrals, and

intercalaries of *Acanthias*, and the vent. arches of the others
continue

to grow by intussusception to a late age but this type of growth
is

gradually limited by the calcification of both outer and inner
surfaces of

the cartilages to form the tesserae. The tesserae consist of
thin

calcareous plates and increase in thickness by deposition of
more Ca salts

in the cartilage. After the appearance of the tesserae, the
vertebral

cartilages continue to grow, slightly in most cases, by renewed
cart.

formation along the conn. tissue boundaries between the
cartilages and

under the perichondrium, and this serves in most cases chiefly
to attach

the cartilages firmly to the conn. tissue. It is of importance,
however,

in the dors. cartilages of *Galeus*, *Pristiurus*, and *Scyllium*
where there is

much renewed cart. formation in the conn. tissue and under the perichondrium, resulting in calcified cartilage resembling bone in some places. By the inwandering of cells, the chorda sheath becomes

divided into an acellular collagenous layer, and an outer cellular fibrous sheath which grows by formation of new fibers and intercellular substance. This cellular sheath becomes divided into inner and outer zones of chondromucoid by a middle zone which remains fibrous. This middle zone soon calcifies while the outer and inner zones increase in thickness by intussusception. The calcified ring prevents further intussusception and exerts a radial tension upon the outer and inner zones which causes the appearance in them of radial collagenous fibers.

The inner zone squeezes the notochord at each vertebra. Upon the outer surface of the outer zone tesserae arise and these permit further growth only in a diagonal direction. The basidorsals and basiventrals fuse with the cartilage of the outer zone, thus forming the vert. centrum, and the 4 intermedialia arise in the remains of the skeletogenous tissue outside the elastica extract between the basidorsals and basiventrals. In Acanthias these intermedials consist of hyaline cartilage with some calcified lamellae, while in Galeus they soon calcify and show annual calcareous rings. The intervert. ring in the chorda sheath continues to grow mostly by formation of collagenous fibers throughout life and remains therefore in a somewhat embryonic condition. The calcified ring of the middle zone of the chorda sheath does not extend into the intervert. tissue which is thus continuous with the outer zone. The latter lengthens, and so accomplishes elongation of the vert. column by continually encroaching on the growing intervert. region. Elongation ceases when the calcified middle zone meets and fuses with the longitudinal calcified lamellae which are laid down in the outer zone. The median zone gradually becomes curved

with concave surface facing the outer zone. In Galeus calcareous lamellae radiate diagonally from an intercalary growth zone. Through the curvature of the calcified middle zone the centrum takes on the characteristic hour-glass shape and grow.-: at its ends both in length and thickness. The chorda increases both by cell multiplication and by intussusception of the inner cells which become vacuolated. At first it grows everywhere but growth becomes limited to the intervert. region by the pressure upon it of the inner zone of the vertebrae. The intervert. region remains continuous with the perichondrium and the conn. tissue between the arch cartilages, in this way assuring further growth. The breaks in the elastica extract spread permitting union of the arches and centrum and the membrane remains as an elastic net in the peri-condrium and conn. tissue. The elastica int. and acellular fibrous layer of the chorda sheath stretch with the growth of the chorda but do not thicken. There is a long discussion of the correlation of morphological and physiological stages in the development of the vertebrae. During the sclerotome and hyaline cartilage stages there is imbibition of water and growth by intussusception. This is followed by the formation of collagenous and calcified tissue. ABSTRACT AUTHORS: L. H. Hyman

L10 ANSWER 29 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1907:2442 CAPLUS

DN 1:2442

OREF 1:622c-h

TI Absorptive Properties of Various Charcoals

AU Rosenthaler, L.; Turk, F.

CS Pharm. Inst. Univ. Strassburg

SO Archiv der Pharmazie (Weinheim, Germany) (1907), 244, 517-36

CODEN: ARPMAS; ISSN: 0365-6233

DT Journal

LA Unavailable

AB The experiments were conducted under varying conditions as to temperature,

time, concentration, and kind of solvents used. Substances used were,

codine, caffeine, salicin, picrotoxin, gallic acid, tannic acid, oxalic acid, potassium oxalate, indigo and glucose; also the separation of caffeine from tea, coffee and guarana. From their results, the authors draw the following conclusions: That the charcoals may be divided into two groups, according to their absorbent powers; 1, bone, flesh, and "vegetable blood" charcoals; 2, blood, linden and sponge charcoals. The absorption for the same coal depends upon the solvent used. The greatest absorption occurs with solvents in the following order: Water, alcohol, methyl alcohol, acetic ether, acetone and chloroform. Relatively less absorption takes place from concentrated than from dilute solutions. The decolorizing power of charcoal depends upon its power of absorption. The charcoal should be purified by washing with the solvent to be used, or by boiling with acid and washing. It is sufficient to leave the substance in contact with the charcoal at ordinary temperature. Animal charcoal has a powerful oxidizing action and should not be used for substances easily oxidized. For the quantitative determination of such substances as sugar in wines and other liquids, charcoal should not be used unless it has been previously shown that the substance to be estimated is not absorbed under similar conditions. L. Rosenthaler adds to the preceding some experiments upon the absorption of resorcinol, hydroquinol, acetanilide and cholesterol by charcoal, and concludes that the ratio of absorption is in proportion to the molecular weight. Hence it is not advisable to decolorize a substance with charcoal when the molecular weight of the substance is greater than that of the color present.

L10 ANSWER 30 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1906:144501 CAPLUS
DN 0:144501
TI New reactions and derivatives of the glucuronic acid: Report
VII. - About
Glucuronic Acid. [machine translation]
AU Neuberg, Carl; Neimann, Wilhelm

CS Berlin. Chem. Lab. d. Pathol. Inst. d. Univ.
SO Zeitschrift fuer Physiologische Chemie (1905), 44, 97-113
From: Chem. Zentr., 1905, I, 1084-1086
CODEN: ZPCHA5
DT Journal
LA Unavailable
AB [Machine Translation of Descriptors]. Similarly, the kinds of sugar also the glucuronic acid by alkalis relocates by separating the developing products in satisfactory way. The effect of CaO defined substances will produce the analogous Saccharinum bearing of grape sugar as by-product. Saccharonic acid supplies the develops lactic acid and glyceric acid. It is identical to the oxidation product produced from KILIANI from saccharin. $\text{COOH}-(\text{CH}\cdot\text{OH})_2-\text{C}(\text{CH}_3)\cdot\text{OH}-\text{COOH}$. By accumulation of hydrocyanic acid, the glucuronic acid Pentaoxypimelinic acid, $\text{COOH}-(\text{CH}\cdot\text{OH})_5-\text{COOH}$ supplies identically to the KILIANI by oxidation α -Glucose carbonic acid and E. FISCHER by oxidation α of produced Glucoheptose. The addition of HCN is done via effect of KCN on glucuronic acid free HCN and glucuronic acid which does not react on the other, like free Glucosamine free HCN which does not bind (NEUBERG and WOLFF, Ber. Dtsch. Chemical Ges. vo. 35, pg. 4018; C. vo. 1903, I. pg. 390). After investigations of SCHOORL (Rec. trav. chim. Pays-Bas vo. 22, pg. 31; C. vo. 1903, I. pg. 1081) urea reacts with aldoses under exit of 1 mole of water. Equimolecular quantities of carbamide and glucuronic acid are connected in 5% H_2SO_4 of containing solution to a urea glucuronic acid, $\text{NH}_2\cdot\text{CO}\cdot\text{N}:\text{CH}(\text{CH}\cdot\text{OH})_4-\text{COOH}$, which can be separated by easily soluble barium salt precipitable by alcohol from insoluble basic Barium glucuronate and BaSO_4 . It is laevogyrate like "paired glucuronic acid" and disintegrates by effect of boiling mineral acid into the components of the free acid suffers in decay when standing the aqueous solution. It is very probable that urea glucuronic acid in certain urines are anti-clockwise dextrogyrate becomes very easy and no increased content of phenol or indoxyl. Compounds of the glucuronic acid with phenyl hydrazine are always apart from GIELSA's phenyl hydrazone

not in the pure known mixtures of the numerously possible connecting forms

of hydrazide, osazone, Hydrazohydrazide, Osazone hydrazide etc. develop,

(see original for graphics). By a small trick, it can produce Glucuronic

acid osazone purely by effect of 3 mole of acetic acid phenyl hydrazine on

1 mole of Glucuronic acid with 40° during 1-3 days. The composition has similarity to the Glucosazone for confounding with melting

point of 200-205°. Heats up the pure Glucuronic acid osazone in the pipe with 1.2 mole of Phenyl hydrazine and the twenty way quantity

alcohol in 2 hours on 150°, then the Osazone hydrazide of the glucuronic acid of the melting point 212° develops in the composition, (see original for graphics). Both hydrazine compounds does

not have any meaning for the isolation of the glucuronic acid from impure

solutions. Effect of lime on glucuronic acid. 50 g of glucuronic acid,

30 g CaO and 300 ccm water is kept in 3 months with room temperature and 1 month with 40°. No longer reducing solution was

treated with CO₂ in the boiling heat and according to the filtration with

lead acetate (precipitation I), lead acetic (precipitation II) and leadsub

acetate + NH₃ (precipitation III) precipitated, (see original for graphics). All three precipitations were treated into aqueous suspension

with H₂S. With the concentrating precipitation supplied Nd. I, 2 g

Saccharon, C₆H₈O₆ + H₂O and the anhydride of the Saccharonic acid.

Precipitation II did not result in a defined product, and III supplied

anti-clockwise glyceric acid whose barium salt is dextrogyr about the

cuprous salt, (see original document for graphics). Effect of potassium

cyanide on glucuronic acid. 26 g of Glucuronic acid lactone, 8 g of KCN

and 100 ccm water were let stand to the disappearance of the reduction ability (10-14 days) at usual temperature. The high viscosity

reaction mixture was lively warmed up with glacial acetic acid acidified

to the expulsion of the excess HCN and to the saponification of the formed

amide with respect to nitrile, then with NH₃ neutralized and with lead

acetic precipitated. The light yellow lead salt was filtered off, washed and divided with H₂S. From heating with CaCO₃, it resulted to the lime salt which crystallizes with bone charcoal decolorized solution. The derivative is optically inactive α -Glucopentaoxypimelinic acid. Effect of urea on glucuronic acid. 7.5 g of Glucuronic acid eanhydrid, 2.5 g urea and 40 ccm H₂SO₄ from 5% with 40° is kept. The clockwise rotation decreases without disappearing completely and it becomes constant after 2 1/2-monthly standing. Since it cannot be removed in reaction stepped of glucuronic acid by anaerobic digestion, the subsequent method serves for the isolation of the Ureidoglucuronic acid. The liquid is shifted in the cold with saturated baryta water and boiled up fast, thus the insoluble basic Barium glucuronate precipitated beside BaSO₄. The filtrate is cooled immediately by ice and released with CO₂ from the barite and restricted in the vacuum with alcohol precipitated. If the precipitation reduces FEHLING solution, then with the concentrating glucuronic acid splitting are made. From repeated dissolving in water and cases by means of alcohol of pure barium salt of the Ureidoglucuronic acid results, [NH₂·CO·N:CH(CH·OH)₄-COO] 2Ba = C₁₄H₂₂O₁₄N₄Ba. White, steady precipitation is reduced after 3-4-minutes heating. [α]D = -15.83° (l = 1, C = 8.84, α = -1° 24'). Enzymes, like emulsin, Kefir lactase or yeast maltase are not contested. With exact precipitation of the barium by means of H₂SO₄, an anti-clockwise solution of the free urea glucuronic acid develops ([α] D = about -21°) which becomes strongly reducing and dextrogyr, as decay occurs in the components. By conversion of leadsub acetate, NH₃ is obtain from the ureidoglucuronic acid barium with no other crystallized salt. The urea is not provable in the Urea glucuronic acid neither with HNO₃ nor oxalic acid. Effect of phenyl hydrazine on glucuronic acid. a) A solution is dissolved from 3.5 g of Glucuronic acid lactone in 100 ccm water and 6.6 g phenyl hydrazine in the theoretical quantity of acetic acid from 30% in the incubator with 40° in the closed container, then the mixture colors

of light yellow begins the elimination of felted needles after 3 days, the container as thick mash fulfills. The substance has the composition

$C_{18}H_{20}O_5N_4$ with melting point $200-202^\circ$ is few soluble in water, benzene, insoluble in ethers, easily soluble in acetone and

very easily soluble in pyridine. The osazone turns in the Pyridine

alcohol mixture left. Gives with baryte hydrate and lead acetic precipitations due to formation of salts at the carboxyl group.

b) When

warming up Glucuronic acid osazone with 1.2 mole of Phenyl hydrazine and

the twenty way quantity alcohol in the pipe on 150° , it produces the few soluble Osazone hydrazide, $C_{24}H_{26}O_4N_6$. Discolors with 210°

and melts with 212° under lively gas coil. In all solvents, it is

few soluble except in pyridine and anti-clockwise in the Pyridine alcohol

mixture. The compound could not be kept pure by direct heating up of

glucuronic acid, alcohol and phenyl hydrazine in the pipe.

L10 ANSWER 31 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1906:215657 CAPLUS

DN 0:215657

TI The trade with benzenes, their composition, investigation and utilization.

[machine translation]

AU Frank, Fritz

SO Chem. Ind. (1901), 24, 262-66

From: Chem. Zentr., 1901, I, 1251-1253

DT Journal

LA Unavailable

AB [Machine Translation of Descriptors]. (Conclusion of page 1125). The

middle vapor density of the commercial products (see original document for

table), can hardly be used only for the evaluation of the degree of the

purity of the products, but for the recognition of their composition.

Determination of the CS_2 . Instead of the very recommendable, but in

practice not in-patriated method of LIEBERMANN and SEYEWETZ (Ber. Dtsch.

Chemical Ges. 24. 788) is generally the subsequent titrimetric sample used,

those on the formation of xanthogenic acid potassium and shifting of the

same in water insoluble. Copper xanthogenate is based on: One
mixes 50 g of the benzols concerned with 50 g of a solution of
11 g KOH in
90 g 100% alcohol, adds about 100 ccm water after standing
lasting several hours in addition, vibrated several times
through,
separates the aqueous lye from the benzene and washes the latter
still several times with water. The aqueous liquids are
combined, and the formed potassium xanthogenate in the solution
or
aliquots of parts of the same after the neutralization with
acetic acid so
long with a copper solution - the same contains 12.475 g of
crystallized
CuSO₄ in the liter, and 1 ccm the same corresponds to 0.0076 g
CS₂ -
shifted, until with the glass rod of taken out drops, brought on
filter
paper, with a drop brought beside it ferrous cyanogen potassium
solution
lets develop a rod coloring at the point of contact. The
termination
point of the reaction recognizes already by that developed in the
beginning finely distributed precipitation of copper xanthogenate
together-clumps, 90's and 50's benzene contained on the average
0.2-1%,
and 0.0 to 0.5% CS₂, the higher benzenes no CS₂, the benzene
advances more
than 5% CS₂. With the examination of the latter one must
increase the
indicated quantity alcoholic KOH, respectable those of the
benzols make
smaller. Author warns CS₂-released of benzenes from the foreign
country
of the purchase allegedly. Thus as particularly purely praised
"Carburierbenzol" from England a still 0.608% CS₂ and contained
a bromine
consumption of 4.16%. To the qualitative proof of thiophene in
benzene one
pours some cubic centimeters of pure H₂SO₄ into a flat, before
porcelain
dish rinsed out with pure H₂SO₄ onto a granule isatine,
laminates over it
the benzene and covers the bowl with watch glass. With pure
benzene no
blue rings may form around the isatine within one hour.
Concerning the
volumetric determination of the thiophene in the benzene see
DEINIGES
(Bulletin Society Chim., Paris [3] 15. 1064; C. 96. II. 852).
The
determination of paraffin hydrocarbon materials. As paraffins
seizes

together not all sulfurate or not body destroyable by fuming H_2SO_4 ,

therefore also the Naphtene and the CS_2 , which determine directly can

removed the sum. For the quantitative determination of the paraffins 200

g of the sample with 500 g 20% anhydride containing H_2SO_4 , 15 minutes of a

long under avoidance of each heating up in the separating funnel are shake and then of 2 hours serve calmly. After discharging the H_2SO_4

one repeats still twice shaking with new H_2SO_4 - generally speaking 1 1/2

kg H_2SO_4 is necessary for the dissolution of the hydrocarbon materials -

and let stand. One collects the floating oil for itself and lets the

H_2SO_4 on it same the weight quantity of small ice, which is in 3 liter-pistons, in slow current of under agitation, flow for its part,

without the temperature over 40° , and distilled rises over free flame into submitted 100 ccm separating funnels directly. As soon as except the oil distilling, first still 50 ccm water changed over one recovered surely all mechanically dissolved paraffin.

After discharging water it combines it with the originally collected oil and so often shakes it with 30 g each of above H_2SO_4 , until

no more decrease in volume takes place. The weight of the oils washed

afterwards with small quantities distilled water gives, divided by 2, the percents by weight at paraffin in the test.

90's-, 50's- and 0-% of benzenes contains hardly over 1, toluene nearly

none, xylene to 3% paraffin. Titration with bromine; medium pipette

brings, one to 5 ccm of the sample into a glass stopper with a volume of

approximately 50 ccm, adds 10 ccm diluted 20% H_2SO_4 in addition and lets

fast so much in addition-flow from a burette to 1/10 normal potassium

bromate-potassium bromide solution (= 9.9167 g KBr 2.7833 g KBrO_3 in the

liter), then after, 5 minutes long continuous shaking of the sample. The

reaction is terminated, as soon as the floating oil is orange colored

after 15 minutes for long standing, and a drop of the same, on freshly

prepared, dampened iodine zinc strength paper dabbed, immediately gives

dark-blue coloring. Consumption of bromine - 1 ccm of the 1/10 normal solution corresponds to 0.008 g bromine - is to be indicated directly. It is effective to make and take from both following accurate experiments, medium only on a preliminary test. Pure benzene and toluene gives at 1/10 ccm clear bromine reaction to the bromine solution, to decolorize during 50's and 90's benzene about 0.6%, rarely over 1%. Determination for examination for the behavior against H₂SO₄, on the content to resinable, or unsaturated compounds, 5 ccm concentrated H₂SO₄, with 5 ccm of the sample in 15 ccm seizing preparation flask in 5 min. long strongly through-shake, obtained after 1-2 minutes long standing with a solution of potassium dichromate in 50% pure H₂SO₄ compared, which, in same quantity and in a same bottle, as the H₂SO₄ of the sample is over-laminated and present, for their part with 5 ccm purest benzene 50's, 90's and technical benzene shows the color of a solution from 0.5 to at the most 2.5 g, xylene from 1.0-2.0 g K₂Cr₂O₇ in 1 liter the 50% H₂SO₄; with pure benzol and toluene remain colorless the H₂SO₄. The color tone of the type solutions holds itself longer time, the over layering with pure benzol is to be made against it each time again. The test by smell is possible still with 90's the benzene and with the solvent naphta from time to time. With first it is sufficient to pour and evaporate little on filter paper: The residue is not to possess a sharp or stinging smell. Of to 160°; boiling solvent naphta 20 ccm in the dished plate is let evaporate when gentle heating up: The residue free of sharp smell may not be only resinous tan and colored. The inflammation point of the benzenes (see original document for table) are determined in ABEL's apparatus: 90% Benzene, 50% Benzene, 0% Benzene, bis pigment 160°; boiling solution benzene, to pigment 175°; boiling solution benzene; Density..., 0.880-0.883, 0.875-0.877, 0.870-0.872, 0.874-0.880, 0.890-0.910; Inflammation point, under -4°,-, -, +21°,

+28°; Commercial heavy benzene, pure benzene, toluene, xylene;
Density ..., 0.920-0.945, 0.883-0.885, 0.870-0.871, 0.867-0.869;
Inflammation point..., +47°, -8°, +5°, +21°.
Quantitative determination of the individual benzene-homologous
in the commercial products. The same is done via fractionation of 1 kg
of the benzols concerned from an alembic, still copper similarly like
the determination boiling point (previously cited). Normal
commercial benzene give thereby on the average subsequent numbers in per cent: (see
original document for table). As fractions caught with 1. and 2. to 79°;
as advance, then 79-85°, 85-105°, 105-115°, with 3. to
79°; advance and 79-81°, with 4. to 109°; advance and
109-110.5°, as well as with the xylene to 135°; advance,
135-137°; (p-compound), 137-140°; (m-compound) and
140-145°; (o-compound). The use of the benzene and its homologs.
The benzenes are used mainly in the dye industry, as well as
furthermore to the carburation of the illuminating gas. For period of one
year so-called "technical benzene" looks for, density 0.882 to 0.884
containing 95% benzene and 5% toluene to displace with success, the
gasoline so with the operation of engine of all type, furthermore in mixtures
with white spirits with lighting systems, particularly however with the
extraction of bone fat and seed cake, even if during the seed defatting by
means of benzene still some technical grievances are to be overcome.
In the lacquer production found to solvents, the technical benzene both
and like also and addition to spirit varnishes, like above all as
turpentine oil replacement entrance. Also in the rubber industry still too
little lets itself replace the experiences of English factories of the CS2
considered by benzene after in Germany.

L10 ANSWER 32 OF 33 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1906:209396 CAPLUS
DN 0:209396
TI On Pyridine carbonic acids. [machine translation]
AU Pinner, A.
CS Berlin

SO Berichte der Deutschen Chemischen Gesellschaft (1900), 33,
1225-30

From: Chem. Zentr., 1900, I, 1225-1226

CODEN: BDCGAS; ISSN: 0365-9496

DT Journal

LA Unavailable

AB [Machine Translation of Descriptors]. From raw material to
prepare the

Pyridine carbonic acid with 12 tests served from Pyridine bases,
which

were extracted from coal tar with 150 g each, and whose main
boiling

points lay between 128° and 148°. The oxidation of the oil
happened after the subsequent procedure, which deviates from

WEIDEL for

the bases of some bone-oil prepared. 150 g base were cooked
into a boiling solution by 540 g KMnO₄ in 13 liters water that
is slowly registered and up to the decoloration; the liquid

filtered off

by the manganese dioxide mineral was released by distillation
from

unaffected bases, restricted with sulfuric acid which is not
completely

neutralized, and on 300 to 400 ccm evaporated now exactly
neutralized,

until a substantial part of the K-sulfate over crystallized. By
interference of the poured off solution with the triple quantity

alcohol

the remainder of the salt was removed and the filtrate to dry

ones

evaporated on that. On the average of 210 g of K-salts

behind-remained,

those in the 1 1/2 doubly folding quantity of water dissolved
and at 70° with copper acetate became fractional precipitated.
Here, picolinic acid separates copper in violet, in hot
water is very easily soluble. Lamella first off, during the

salts

β and γ -Pyridine carbonic acid, in blue or green-blue, short,
thick, also prisms completely insoluble into boiling water
precipitate, mixed with the salt α -Methylpyridine- α -carbonic
acid, into later precipitate accumulated, and α , α' of
pyridine dicarbonic acid copper in solution remains. The

cuprous salts

are suspended into boiling water and divided by H₂S;

with the vaporization of the filtrates, it is to be considered
that the

Pyridine carbonic acids with steam somewhat be volatile. The

picolinic

acid, C₅H₄N (COOH) α , from benzene in transparent, glossy, hard
crystals,

one keeps pure. β and γ of carbonic acid (nicotinic acid and
isonicotinic acid) is separated by alcohol, in which the latter

is insoluble. In alcoholic mother liquors remains α -Methylpyridine- α' -carboxylic acid, $\text{CH}_3 \cdot \text{C}_5\text{H}_3\text{N} \cdot \text{COOH}$, which is also easily soluble in water, but crystallized well from benzene (see the subsequent references). To the separation α , α -Pyridine dicarboxylic acid, $\text{C}_5\text{H}_3\text{N} (\text{COOH})_2$, is suitable best the salt $\text{C}_7\text{H}_4\text{NO}_4\text{K}$, $\text{C}_7\text{H}_5\text{NO}_4 + 3\text{H}_2\text{O}$, which precipitates into little soluble glossy needles, if one the neutral potassium salt in the triple quantity cold water is soluble and half of its added weight concentrated hydrochloric acid. Concerning the quantitative proportions of the individual base in the used material, it resulted that the fraction 128-134° generally α -Picoline and therefore in preparation of the picolinic acid suitably contains, during the fraction of 137 to 142° about quantities resemble β and γ -Picolin and very much α - α' -Dimethylpyridine, beside only few α -Picoline exhibits, and for the production of Nicotinic acid and isonicotinic acid that is useful. The Esterified acid succeeds to the same by introducing HCl into boiling alcoholic solution, until the chlorine hydrates precipitating up first again gel. The esters are rather easily, more saponifiable, for example by potassium carbonates; with acetic ester, they condensed in the presence from the well-ethylate to Pyridoylacetic ester, their sodium salts, $\text{C}_6\text{H}_4\text{N} \cdot \text{C} (\text{ONa}) : \text{CH} \cdot \text{C}_2\text{H}_5$, in water and is called, in alcohol is easily soluble and on addition of acetic acid to the free esters as oil does not separate also in the vacuum not undecomposed, and be more distillable. The chlorine hydrates of the esters are much more easily decomposing, than the metal salts. By conversion of the latter with ethyl bromide, the author hoped, bromine-ethyl derivative of the formula $\text{C}_6\text{H}_4\text{N} \cdot \text{CH} (\text{CO}_2\text{C}_2\text{H}_5) \cdot \text{CH}_2 \cdot \text{CH}_2$. Br, extracted and from these after LIPP (LIEBIG's Ann. 289. 173; C. 96. I. 369) to be able to represent Pyrroline derivatives, to the nicotine synthesis, will be important; so far however, during the effect of ethyl bromide, only very unpleasant products were received.

DN 0:263262
 TI Comparative investigation of Perphosphates of different origin.
 [machine translation]
 AU Sestini, F.
 CS Pisa
 SO L'Orosi (1897), 19, 289-91
 From: Chem. Zentr., 1897, I, 195
 DT Journal
 LA Unavailable
 AB [Machine Translation of Descriptors]. (Provisional report) with
 the dry
 distillation of Perphosphates from bones, author obtains water a
 small quantity of oil, which possesses the characteristic smell
 of the
 animal oil. This oil can be divided by methanol into raw
 Pyrocoll and animal oil. Thus one obtains for example from 50 g
 each
 from: Raw Pyrocoll, animal oil; 1. Perphosphate from degreased
 bone . . ., 0.478 g, 7.69 g; 2. Perphosphate from bones, degreased
 and something from glue are released. . . ., 0.360 g, 8.28 g;
 3.
 Perphosphate from bones, are degreased and well released from
 glue. . . .
 ., 0.231 g, 5.27 g. Also with the distillation of Perphosphate
 from
 mineral phosphate develop black substances, which can be
 separated
 by methanol into a soluble and an insoluble part, whereas
 bituminous
 smell. Thus one obtains from 50 g: Insoluble in methanol,
 soluble in
 methanol; 4. Perphosphate of mineral origin. ., 0.036 g, 0.226
 g. Author
 wants to examine Perphosphate of unknown origin in this way, in
 order to
 be able to pull from the quantities and the kind of the
 distillate of
 conclusions on the origin of the products.

=> s bone (3a) particle
 L11 852 BONE (3A) PARTICLE

=> s tissue (graft or genera?)
 MISSING OPERATOR 'TISSUE (GRAFT'
 The search profile that was entered contains terms or
 nested terms that are not separated by a logical operator.

=> s tissue (3a) (graft or genera?)
 L12 24019 TISSUE (3A) (GRAFT OR GENERA?)

=> s l11 and l12

L13 4 L11 AND L12

=> dup rem l13

PROCESSING COMPLETED FOR L13

L14 3 DUP REM L13 (1 DUPLICATE REMOVED)

=> d bib abs 1-

YOU HAVE REQUESTED DATA FROM 3 ANSWERS - CONTINUE? Y/(N):y

L14 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2007:1213040 CAPLUS

DN 147:455683

TI Bone graft composition containing acellular tissue and
demineralized bone matrixes

IN Connor, Jerome; Qiu, Qing-Qing

PA USA

SO U.S. Pat. Appl. Publ., 18pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.
DATE	-----	----	-----	-----
PI	US 20070248575	A1	20071025	US 2006-407446
20060419				
	AU 2007240510	A1	20071101	AU 2007-240510
20070417				
	CA 2646487	A1	20071101	CA 2007-2646487
20070417				
	WO 2007124302	A2	20071101	WO 2007-US66771
20070417				
	WO 2007124302	A3	20081127	
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF,			

BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
TG, BW,
GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,
AM, AZ,

BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
EP 2007196 A2 20081231 EP 2007-760765
20070417

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR,
HU, IE,
IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI,
SK, TR,

AL, BA, HR, MK, RS
PRAI US 2006-407446 A 20060419
WO 2007-US66771 W 20070417

AB A method of making a bone graft composition (BGC) comprises
combining fragments

of an acellular tissue matrix (ATM) with fragments of
demineralized bone

matrix (DBM) to create a mixture, wherein the fragments of ATM
and the

fragments of DBM in the mixture are substantially hydrated and
drying the

mixture to form a BGC where the BGC when hydrated is
osteoinductive. Also

featured are methods of treatment using the bone graft
composition and articles

of manufacture that include the bone graft composition

L14 ANSWER 2 OF 3 BIOSIS COPYRIGHT (c) 2009 The Thomson
Corporation on STN

DUPLICATE 1

AN 1999:313905 BIOSIS

DN PREV199900313905

TI Comparison of bioactive glass to demineralized freeze-dried bone
allograft

in the treatment of intrabony defects around implants in the
canine

mandible.

AU Hall, E. Ellen; Meffert, Roland M.; Hermann, Joachim S.;
Mellonig, James

T.; Cochran, David L. [Reprint author]

CS Department of Periodontics, University of Texas Health Science
Center,

7703 Floyd Curl Drive, San Antonio, TX, 78440, USA

SO Journal of Periodontology, (May, 1999) Vol. 70, No. 5, pp.
526-535. print.

CODEN: JOPRAJ. ISSN: 0022-3492.

DT Article

LA English

ED Entered STN: 17 Aug 1999

Last Updated on STN: 17 Aug 1999

AB Background: The purpose of this study was to evaluate and
compare the

healing of different bone grafting materials adjacent to titanium plasma-sprayed (TPS) endosseous dental implants. Methods:

Implant osteotomy sites were prepared and standardized 3-walled intrabony defects (3 mm X 5 mm X 5 mm) were created at the mesial of each implant site.

Thirty-two TPS implants were placed in edentulous mandibular ridges of the 4 dogs. Periodontal dressings were placed in the defect sites so as to create a defect simulating bone loss around an implant. After 3 months, the periodontal dressing was removed, the defect sites debrided and evaluated for size, and intramarrow penetration performed. The graft materials tested were 1) canine demineralized freeze-dried bone allograft (cDFDBA); 2) bioactive glass granules of a broad size range 90 to 710 microns (BRG); and 3) bioactive glass granules of narrow size range 300 to 355 microns (NRG). One site on each side of the mandible was not filled and served as a control. Dogs were sacrificed 4 months after graft placement. Results: Histologically, differences in percent bone-to-implant contact in the defect area were observed between the treatment groups. cDFDBA>control=BRG=NRG with statistical significance found between cDFDBA and control ($P = 0.0379$), but no statistically significant difference between control or either bioactive glass material.

When comparing percent bone height fill of the defect in the grafted area, cDFDBA (65.7%) was significantly better than the control (48.9%; $P < 0.05$) with no statistically significant difference between control, broad range bioactive glass (57.3%) and narrow range bioactive glass (56.6%).

When total bone area was measured, the percentage of new bone in the grafted area was cDFDBA (42.1%), broad range glass (33.1%) and narrow range glass (22.6%) with significance found between cDFDBA and NRG ($P = 0.0102$). The content of residual graft particles in soft tissue was significant ($P = 0.0304$) between cDFDBA (1.4%) and NRG

(11.4%) with no significant difference between graft material for residual particle content in bone tissue. Conclusions: The results of this study indicate that percent bone-to-implant contact and percent bone height fill in an intrabony defect around titanium plasma-sprayed implants are statistically significantly higher with the use of DFDBA when compared to bioactive glass material.

L14 ANSWER 3 OF 3 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN

AN 1999:330834 BIOSIS

DN PREV199900330834

TI Synthetic bone grafts in peri-implant bone dehiscences: Histological results in humans.

AU Passi, Piero [Reprint author]; Girardello, Giambattista; Piattelli,

Adriano; Scarano, Antonio

CS Via Zabarella, Padova, 64-35121, Italy

SO General Dentistry, (May-June, 1999) Vol. 47, No. 3, pp. 290-295. print.

ISSN: 0363-6771.

DT Article

LA English

ED Entered STN: 24 Aug 1999

Last Updated on STN: 24 Aug 1999

AB This study describes the histological results found in three patients

treated with osseointegrated implants and Biopiant HTR(R) (Hard Tissue Replacement) synthetic bone graft in peri-implant dehiscences adjacent to implants. This therapy was carried out without

the use of barrier membranes. Biopiant HTR(R) is reported to act as its

own barrier and prevent gingival soft tissue migration ingrowth.

The

histologic picture demonstrated that Biopiant HTR(R) is osteoconductive

and biocompatible, and can be used both as bone substitute and as a

barrier for guided bone regeneration in implant therapy.

=> s bone (3a) graft

L15 23448 BONE (3A) GRAFT

=> s l15 and (medium or media)

L16 424 L15 AND (MEDIUM OR MEDIA)

=> s l16 and solidf?

L17 0 L16 AND SOLIDIF?

=> s l16 and solidif?

L18 0 L16 AND SOLIDIF?

=> s l16 and mill?

L19 12 L16 AND MILL?

=> dup rem l19

PROCESSING COMPLETED FOR L19

L20 10 DUP REM L19 (2 DUPLICATES REMOVED)

=> d bib abs 1-

YOU HAVE REQUESTED DATA FROM 10 ANSWERS - CONTINUE? Y/(N):y

L20 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2008:72122 CAPLUS

DN 148:147707

TI Production method for calcium phosphate nano-particles with high
purity

and their use

IN Brito Lopes, Jose Carlos; Gomes de Queiroz Dias, Madalena Maria;
Tenedorio

Matos da Silva, Viviana Manuela; Quadros de Oliveira E Santos,
Paulo

Alexandre; Mendes Monteiro, Fernando Jorge; Da Cunha Gomes,
Paulo Jorge;

Pataquiva Mateus, Alis Yovana

PA Fluidinova, Engenharia de Fluidos, S.A., Port.; Instituto
Nacional de

Engenharia Biomedica

SO PCT Int. Appl., 16pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.
DATE	-----	----	-----	-----

PI	WO 2008007992	A2	20080117	WO 2007-PT31
20070716				

	WO 2008007992	A3	20080403	
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W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY,
BZ, CA,

CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG,
ES, FI,

GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP,
KE, KG,

KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA,
MD, ME,

MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG,
PH, PL,

PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ,
 TM, TN,
 TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR,
 HU, IE,
 IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK,
 TR, BF,
 BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
 TG, BW,
 GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,
 AM, AZ,

BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
 CA 2635943 A1 20080117 CA 2007-2635943
 20070716
 EP 2041025 A2 20090401 EP 2007-793968
 20070716

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR,
 HU, IE,
 IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI,
 SK, TR,

AL, BA, HR, MK, RS
 PRAI PT 2006-103528 A 20060714
 WO 2007-PT31 W 20070716

AB Calcium phosphate nanoparticles are produced continuously in a network

mixer or static mixer reactor, fed by a calcium solution, a phosphate solution

and an alkaline solution and, optionally, one solvent or dispersing agent. The

propose process enables the micromixing control, which is essential to

form nanometric structures, but it is also a determining factor in the crystals

purity, crystallinity and morphol. The reactants distribution scheme at

the inlet of the reactor and along the reactor, performed continuously or

varying in time, is also a crucial factor to program the pH of the

reactant media along the reactor. The calcium phosphate nanoparticles suspension that exits the reactor can be submitted to

further aging, ultrasonication, separation, drying, sintering and milling. Preferably, hydroxyapatite is produced. Some calcium phosphates are considered biomaterials, used as: food additives

and

nutritional supplements; bone graft for bone replacement, growth and repair; biocements and coating of metallic

implant. Some of the most recent applications include their use in

cosmetics, toothpaste and in esthetical treatments for diminishing

wrinkles by stimulating conjunctive tissue formation. The products can be used as catalysts for water treatment or as absorbents in chromatog. columns.

L20 ANSWER 2 OF 10 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights

reserved on STN

AN 2008407507 EMBASE

TI In vitro degradation of poly-L-D-lactic acid (PLDLA) pellets and powder

used as synthetic alloplasts for bone grafting.

AU Coimbra, M.E.R.; Elias, C.N.

CS Department of Materials Science, Instituto Militar de Engenharia (IME),

Praca General Tiburcio, 80, Rio de Janeiro, RJ 22290-270, Brazil.

maria.coimbra@gmail.com

AU Coimbra, M.E.R.; Coelho, P.G.

CS Department of Biomaterial and Biomimetics, College of Dentistry, New York

University, 345 East 24th Street, New York, NY 10100, United States.

maria.coimbra@gmail.com

AU Coimbra, M. E. R. (correspondence)

CS Department of Materials Science, Instituto Militar de Engenharia (IME),

Praca General Tiburcio, 80, Rio de Janeiro, RJ 22290-270, Brazil.

maria.coimbra@gmail.com

SO Journal of Materials Science: Materials in Medicine, (October 2008) Vol.

19, No. 10, pp. 3227-3234.

Refs: 30

ISSN: 0957-4530 CODEN: JSMMEL

PB Kluwer Academic Publishers, Van Godewijckstraat 30, Dordrecht, 3311 GZ,

Netherlands.

CY Netherlands

DT Journal; Article

FS 027 Biophysics, Bioengineering and Medical Instrumentation

029 Clinical and Experimental Biochemistry

LA English

SL English

ED Entered STN: 23 Sep 2008

Last Updated on STN: 23 Sep 2008

AB The objective of this study was to evaluate the in vitro degradation of

pellet and powder forms of a poly-l-d-lactic acid material used to produce

plates and screws for orthopedic, oral, and maxillofacial applications.

Materials and methods: In order to produce the powder form the as-received pellets were milled in a cryogenic chamber. Particles size distribution (PSD) histograms were developed for both forms. The materials were then characterized by Scanning Electron Microscopy (SEM), Differential Scanning Calorimetry (DSC), and Thermogravimetric Analysis (TGA) before and after immersion in simulated body fluid for 30, 60, and 90 days. Results: SEM showed that for both forms material degradation started after 30 days of immersion in SBF and evolved until 90 days. Degradation started at the amorphous zones of the polymer and exposed of deeper crystalline layers. The pellet and powder samples PSD showed polydispersed patterns with mean diameters of 673.98 μm and 259.55 μm . Thermal onset degradation temperatures were 365.64°C and 360.30°C, and of 363.49°C and 359.83°C before immersion and after 90 days in SBF for the pellet and powder forms, respectively. The Tg's of the pellets and the powder were approximately 61.5°C and 66°C, and their respective endothermic peaks were observed at approximately 125°C and 120°C. The specific heat (c) was approximately 8.5 J/g and 6.2 J/g for the pellet and powder material, respectively. Conclusion: According to the results obtained, cryogenic milling resulted in particle plastic deformation, and alterations in glass transition temperature, melting temperature, and specific heat of the material. .COPYRGHT. 2008 Springer Science+Business Media, LLC.

L20 ANSWER 3 OF 10 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights reserved on STN

AN 2008143754 EMBASE

TI Immobilization of a bone and cartilage stimulating peptide to a synthetic bone graft.

AU Wang, Vivian; Misra, Gauri; Amsden, Brian (correspondence)

CS Department of Chemical Engineering, Queen's University, Kingston, ON K7L

3N6, Canada. brian.amsden@chee.queensu.ca

SO Journal of Materials Science: Materials in Medicine, (May 2008) Vol. 19,

No. 5, pp. 2145-2155.

Refs: 29

ISSN: 0957-4530 CODEN: JSMMEL

CY Netherlands

DT Journal; Article

FS 027 Biophysics, Bioengineering and Medical Instrumentation

LA English

SL English

ED Entered STN: 10 Apr 2008

Last Updated on STN: 10 Apr 2008

AB A synthetic peptide fragment of human collagen type I (BCSP®-1) was

linked to the surface of a commercially available ceramic in an effort to

improve the properties of the bone graft substitute to accelerate local healing. BCSP®-1 was covalently immobilized on the

surface of the ceramic via the linkers

3-aminopropyl-triethoxysilane

(APTES) and suberic acid bis-N-hydroxysuccinimide ester (DSS).

The chosen

chemistry was non-cytotoxic. A rat calvaria cell assay using alkaline

phosphatase (ALP) as an osteoblast differentiation marker, showed that

modifying the surface of the ceramic was enough to enhance ALP activity,

although the total cell population on the surface decreased. A significant increase in ALP activity/cell was noted with serum albumin

bound to the surface, however, the BCSP®-1 bound surface exhibited an

even greater ALP activity that showed a surface concentration dependent

trend. An optimal BCSP®-1 surface density in the range of 0.87-2.24

nmol/cm(2) elicited the maximum ALP activity/cell at day 6 of culture.

The peptide bound ceramic generated an ALP activity/cell that was roughly

3-fold higher than the non-modified ceramic and 2-fold higher than the

APTES-grafted ceramic. .COPYRGT. 2007 Springer Science+Business Media, LLC.

L20 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 1

AN 2008:174964 CAPLUS

DN 148:399371

TI Genetic markers of osteogenesis and angiogenesis are altered in processed

lipoaspirate cells when cultured on three-dimensional scaffolds

AU Huang, Catherine K.; Huang, Weibiao; Zuk, Pat; Jarrahy, Reza; Rudkin,

George H.; Ishida, Kenji; Yamaguchi, Dean T.; Miller, Timothy A.
CS Division of Plastic and Reconstructive Surgery, David Geffen
School of

Medicine at UCLA, Los Angeles, CA, 90095, USA

SO Plastic and Reconstructive Surgery (2008), 121(2), 411-423

CODEN: PRSUAS; ISSN: 0032-1052

PB Lippincott Williams & Wilkins

DT Journal

LA English

AB Background: Liposuction-derived stem cells (processed
lipoaspirate) have

recently been shown to be capable of differentiating into bone.
Most

studies on osteoblastic growth and differentiation have been
conducted in

a conventional two-dimensional culture system; however, in
native bone,

osteoblasts are situated in a three-dimensional configuration.

There have

been limited studies of processed lipoaspirate behavior in
three-dimensional systems. The authors studied the influence a
three-dimensional scaffold has on the expression of genes

related to

osteogenesis and angiogenesis in processed lipoaspirate cells.

Methods:

One million processed lipoaspirate cells were seeded onto
two-dimensional poly(L-lactide-co-glycolide) films or in

three-dimensional

poly(L-lactide-co-glycolide) scaffolds and incubated in

osteogenic

medium up to 21 days. RNA was extracted and analyzed with quant.

real-time polymerase chain reaction. Results: When an inert

three-dimensional poly(L-lactide-co-glycolide) scaffold was

introduced,

the pattern and sequence of gene expression changed

significantly.

Processed lipoaspirate cells cultured onto three-dimensional
scaffolds had

increased expression of interleukin-8 and vascular endothelial
growth

factor compared with two-dimensional controls at early time
points.

Osteogenesis markers - alkaline phosphatase, collagen type I,
osteocalcin,

osteonectin, and osteopontin - were significantly up-regulated in
three-dimensional cultures relative to two-dimensional controls

after 24 h

and persisted throughout the 21 days. Conclusions: In human

processed

lipoaspirate cells, the introduction of a three-dimensional
scaffold

significantly enhances gene markers of angiogenesis and
osteogenesis. On

three-dimensional scaffolds, processed lipoaspirate cells first up-regulate genes involved with vascular ingrowth and then those involved in bone formation. We believe these differences will significantly impact the design of a bone graft substitute for clinical application.

RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 2

AN 2007:59339 CAPLUS

DN 146:115372

TI Mandibular reconstruction using a combination graft of rhBMP-2 with bone

marrow cells expanded in vitro

AU Seto, Ichiro; Marukawa, Eriko; Asahina, Izumi

CS Tokyo, Japan

SO Plastic and Reconstructive Surgery (2006), 117(3), 902-908

CODEN: PRSUAS; ISSN: 0032-1052

PB Lippincott Williams & Wilkins

DT Journal

LA English

AB The aim of this study was to evaluate the efficacy of a combination

graft, using recombinant human bone morphogenetic protein-2 (rhBMP-2) and culture-expanded cells derived from bone marrow,

for bone regeneration in a nonhuman primate mandible. Five Japanese

monkeys were used. Three milliliters of bone marrow was obtained from the tibia and plated into culture flasks.

Adherent cells

were cultured until near confluence; then, the proliferated cells were

transferred to a three-dimensional culture system using collagen beads as

the cell carrier. The medium was supplemented with ascorbic acid, β -glycerophosphate, and dexamethasone to promote osteoblastic

differentiation. After further proliferation on beads, the cells were

mixed with a collagen sponge that was impregnated with rhBMP-2 and grafted

into surgically created segmental bone defects of the mandibles.

Three

animals received this treatment, and either culture-expanded cells alone

or collagen beads without cells were implanted into the remaining two

monkeys as controls. The animals were killed 24 wk after surgery, and the

results were assessed by radiog. and histol. evaluation. The combination graft of culture-expanded bone marrow cells with rhBMP-2 in a collagen sponge regenerated the mandibular bone completely. By contrast, the graft of culture-expanded cells alone resulted in only a small amount of bone formation, and the implantation of collagen beads alone led to no bone formation. The combination graft of rhBMP-2 and culture-expanded cells, which requires only a small amount of bone marrow, is a reliable method for the reconstruction of segmental bone defects of the mandible.

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 6 OF 10 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights reserved on STN

AN 2005575363 EMBASE
TI Titanium - Hydroxyapatite porous structures for endosseous applications.
AU Popa, C. (correspondence); Vida-Simiti, I.; Batin, G.; Candea, V.
CS Technical University of Cluj-Napoca, 103-105, Bd. Muncii, 400641 Cluj-Napoca, Romania. catalin.popa@stm.utcluj.ro
AU Simon, V.; Simon, S.
CS Babes - Bolyai University of Cluj-Napoca, Romania.
SO Journal of Materials Science: Materials in Medicine, (Dec 2005)
Vol. 16,
No. 12, pp. 1165-1171.
Refs: 15
ISSN: 0957-4530 CODEN: JSM MEL
CY Netherlands
DT Journal; Conference Article; (Conference paper)
FS 027 Biophysics, Bioengineering and Medical Instrumentation
033 Orthopedic Surgery
LA English
SL English
ED Entered STN: 2 Feb 2006
Last Updated on STN: 2 Feb 2006
AB Materials for uncemented endosseous implants have to assure an as short as possible osseointegration time. Thus, a material with both surface bioactivity and a porous outer structure can become a preferred choice for this type of applications. This paper presents a class of titanium-base PM composites, reinforced with particulate hydroxyapatite. Raw materials

were titanium powder, obtained through hydriding - milling - dehydriding, with the grain size of 63-100 μm , and sol-gel hydroxyapatite (HA) powder, produced by the reaction between $\text{Ca}(\text{NO}_3)_2 \cdot 4\text{H}_2\text{O}$ and $(\text{NH}_4)_2\text{HPO}_4$. Blends with 5 to 50%

HA were prepared and pressed in a rigid die, producing single composition

or gradual composition samples. The applied pressure was of 400, 500 or

600 MPa. Sintering was performed in vacuum, at 1160°C. All samples, although well sintered, displayed swelling during sintering, due

to diffusion into the matrix. The increase in volume is more severe for

higher amounts of HA in the green compacts and for higher applied compaction pressure. Compacts with a gradual increase of the HA content

are recommended from the functional and mechanical point of view, but the

increase should be slow, not to produce interlayer cracks. The outer

surface shows interconnected pores, suitable for the ingrowth of vital new

bone. .COPYRGHT. 2005 Springer Science + Business Media, Inc.

L20 ANSWER 7 OF 10 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights

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AN 2004508249 EMBASE

TI Comparison of in vitro mineralization by murine embryonic and adult stem

cells cultured in an osteogenic medium.

AU Shimko, Daniel A.; Burks, Chris A.; Dee, Kay C.; Nauman, Eric A., Dr.

(correspondence)

CS Department of Biomedical Engineering, Tulane University, New Orleans, LA,

United States. enauman@purdue.edu

AU Nauman, Eric A., Dr. (correspondence)

CS School of Mechanical Engineering, 585 Purdue Mall, Purdue University, West

Lafayette, IN 47907-2088, United States. enauman@purdue.edu

SO Tissue Engineering, (Sep 2004) Vol. 10, No. 9-10, pp. 1386-1398. Refs: 75

ISSN: 1076-3279 CODEN: TIENFP

CY United States

DT Journal; Article

FS 027 Biophysics, Bioengineering and Medical Instrumentation

029 Clinical and Experimental Biochemistry

033 Orthopedic Surgery

LA English

SL English

ED Entered STN: 28 Dec 2004
Last Updated on STN: 28 Dec 2004
AB Nearly half a million bone-grafting procedures occurred in the United States in the year 2000. Tissue-engineered bone substitutes may mitigate difficulties associated with current grafting options. Embryonic stem cells (ESCs) could be a potential cell source for bone substitutes; however, direct comparisons between ESCs and other cell sources are lacking. Here we provide a direct, long-term, in vitro comparison of mineralization processes in adult, marrow-derived, mesenchymal stem cells (MSCs) and ESCs from the 129/Sv+c/+p mouse strain. MSCs were observed to grow at a slower rate than ESCs. MSCs expressed seven times more alkaline phosphatase (AP) per cell than did ESCs and immediately showed type I collagen and osteocalcin production. ESCs also produced type I collagen and osteocalcin, but production was delayed. Mineral deposition by ESCs was nearly 50 times higher than by MSCs. Spectroscopic analysis showed the calcium-to-phosphorus ratio (Ca:P) of the ESC mineral (1.26:1) to be significantly higher than that of the MSCs (0.29:1), but still 25% lower than hydroxyapatite (1.67:1). Addition of basic fibroblast growth factor significantly inhibited AP expression, mineral deposition, and Ca:P ratios in MSCs and had little effect on ESCs. These functional characteristics may assist with cell selection for purposes of bone tissue engineering.

L20 ANSWER 8 OF 10 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights reserved on STN

AN 2002260129 EMBASE

TI Investigation into an engraftment defect induced by culturing primitive hematopoietic cells with cytokines.

AU Young, Judy C. (correspondence); Lin, K.; Wu, S.; Travis, M.; Hansteen, G.; Abitorabi, A.; Sirenko, O.; Murray, L.; Hill, B.

CS 2833 Tramanto Drive, San Carlos, CA 94070, United States.

SO Cytotherapy, (2001) Vol. 3, No. 4, pp. 307-320.

Refs: 52

ISSN: 1465-3249 CODEN: CYTRF3

CY United Kingdom

DT Journal; Article

FS 009 Surgery

037 Drug Literature Index

030 Clinical and Experimental Pharmacology

029 Clinical and Experimental Biochemistry

026 Immunology, Serology and Transplantation

025 Hematology

022 Human Genetics

LA English

SL English

ED Entered STN: Sep 2007

Last Updated on STN: Sep 2007

AB Background: Strategies for transplanting primitive hematopoietic progenitor (PHP) cells are under development that require in vitro

manipulation of cells for several hours to several days prior to transplantation. This applies to gene-therapy protocols

involving

transduction with adenoviral or lentiviral vectors (typically 1 day of ex

vivo culture) or retroviral vectors (up to 3 days of culture).

Methods:

Human mobilized peripheral blood (MPB) CD34(+) cells were cultured with

the cytokines thrombopoietin mimetic peptide (mTPO), flt3 ligand (FL), and

c-kit ligand (KL). Equal numbers of CD34(+) cells, either uncultured or

cultured for various time periods up to 5 days, were tested for engraftment in sublethally irradiated 8-10 week-old NOD/SCID mice. Cells

were also compared for expression and function of several key surface

molecules. Results: At a limiting dose of 1 million cells, mice receiving uncultured cells had a mean of 20% CD45(+) (human) cells in

their BM 6 weeks post-transplantation, versus 3% for mice receiving 3-5

day cultured cells. Analysis of 10 surface molecules, CD11a, CD18, CD29,

CD49d, CD49e, CXCR-4, CD62L, CD31, CD43, and CD44 over a 5-day culture

period showed that their expression levels were either maintained or

up-regulated on CD34(+) cells and the primitive Thy-1(+) subset.

Similar

percentages of uncultured and 3-day cultured MPB CD34(+) cells bound to

plates coated with vascular cell adhesion molecule-1 (VCAM-1) under both

static and physiological flow conditions, and chemotaxis of cultured cells towards stromal-derived factor-1 (SDF-1) was not impaired, suggesting that VLA-4 and CXCR-4 were functional on cultured cells. CD34(+) Thy-1(+) MPB cells cultured with cytokines expressed increasing levels of Fas receptor beginning at 20 h in culture, with peak expression levels after 3 days (mean Day 0 expression, 39%; mean Day 3 expression, 86%), without increased apoptosis. Including inhibitors of caspases in the media of cells cultured for 24-48 h significantly improved their engraftment in a SCID-hu bone-engraftment model. Discussion: Increased susceptibility to apoptosis upon in vivo injection may contribute to impaired engraftment of in vitro manipulated cells. Inhibitors of apoptosis may increase their engrafting capacity in clinical settings.

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AN 1997368118 EMBASE

TI Aspiration to obtain osteoblast progenitor cells from human bone marrow:

The influence of aspiration volume.

AU Muschler, George F., Dr. (correspondence); Boehm, Cynthia; Easley, Kirk

CS Cleveland Clinic, Cleveland, OH, United States.
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AU Muschler, George F., Dr. (correspondence)

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AU Boehm, Cynthia

CS Department of Biomedical Engineering, Cleveland Clinic Foundation, 9500

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AU Easley, Kirk

CS Department of Biostatistics, Cleveland Clinic Foundation, 9500 Euclid

Avenue, Cleveland, OH 44195, United States.

SO Journal of Bone and Joint Surgery - Series A, (Nov 1997) Vol. 79, No. 11,

pp. 1699-1709.

Refs: 65

ISSN: 0021-9355 CODEN: JBJSA3

CY United States

DT Journal; Article

FS 033 Orthopedic Surgery

LA English

SL English

ED Entered STN: 20 Jan 1998

Last Updated on STN: 20 Jan 1998

AB Bone marrow contains osteoblast progenitor cells that can be obtained with

aspiration and appear to arise from a population of pluripotent

connective-tissue stem cells. When cultured in vitro under conditions

that promote an osteoblastic phenotype, osteoblast progenitor cells

proliferate to form colonies of cells that express alkaline phosphatase

and, subsequently, a mature osteoblastic phenotype. We evaluated the

number of nucleated cells in bone marrow samples obtained with aspiration

from the anterior iliac crest of thirty-two patients without systemic

disease. There were nineteen male patients and thirteen female patients;

the mean age was forty-one years (range, fourteen to seventy-seven years).

The prevalence and concentration of the osteoblast progenitor cells also

were determined, by placing the bone-marrow-derived cells into tissue-culture medium and counting the number of alkaline phosphatase-positive colony-forming units. In order to assess the effect

of aspiration volume, two sequential experiments were performed.

In the

first experiment, aspiration volumes of one and two milliliters were compared. In the second experiment, aspiration volumes of two and

four milliliters were compared. The mean prevalence of alkaline phosphatase-positive colony-forming units in the bone-marrow samples was

thirty-six per one million nucleated cells (95 per cent confidence interval, 28 to 47); a mean of 2400 alkaline phosphatase-positive colony-forming units was obtained from a two-

milliliter aspirate. There was a significant difference among the

patients with respect to the number of alkaline phosphatase-positive

colony-forming units in these bone-marrow samples ($p < 0.001$). Seventy

per cent of this variation in the prevalence was due to variation among patients, and 20 per cent was due to variation among aspirates. The number of alkaline phosphatase-positive colonyforming units in the aspirate increased as the aspiration volume increased. However, contamination by peripheral blood also increased as the aspiration volume increased. An increase in the aspiration volume from one to four milliliters caused a decrease of approximately 50 per cent in the final concentration of alkaline phosphatasepositive colony-forming units in an average sample. CLINICAL RELEVANCE: On the basis of these data, we recommend that, when bone marrow is obtained with aspiration for use as a bone graft, the volume of aspiration from any one site should not be greater than two milliliters. A larger volume decreases the concentration of osteoblast progenitor cells because of dilution of the bone-marrow sample with peripheral blood. We estimate that four one-milliliter aspirates will provide almost twice the number of alkaline phosphatase-positive colony-forming units as will one four-milliliter aspirate. In addition, these data confirm that humans differ significantly from one another with respect to the cellularity of bone marrow and the prevalence of osteoblast progenitor cells. Additional studies are necessary to determine if the number or prevalence of alkaline phosphatase-positive colony-forming units in bone marrow is a determining factor in the efficacy of an autogenous bone or bone-marrow graft and to ascertain how the number and function of alkaline phosphatase-positive colony-forming units may change as a function of factors such as age, menopausal status, and selected diseases.

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AN 1996355607 EMBASE

TI Partial purification and characterization of bone morphogenetic protein

from bone matrix of the premature moose (*Alces alces*):

Degradation of

bone-inducing activity during storage.

AU Viljanen, V.V., Dr. (correspondence); Gao, T.J.; Marttinen, A.; Lindholm,

T.S.

CS Bone Transplantation Research Group, Medical School, University of Tampere, Finland.

AU Viljanen, V.V., Dr. (correspondence)

CS Institute of Medical Technology, PO Box 607, FIN-33101 Tampere, Finland.

SO European Surgical Research, (Nov 1996) Vol. 28, No. 6, pp. 447-460.

Refs: 26

ISSN: 0014-312X CODEN: EUSRBM

CY Switzerland

DT Journal; Article

FS 009 Surgery

LA English

SL English

ED Entered STN: 10 Dec 1996

Last Updated on STN: 10 Dec 1996

AB In spite of the advances in recombinant techniques in the production of bone morphogenetic proteins (BMPs), the best clinical results so far have been obtained with human and animal source-extracted BMPs. Also, the poor availability of recombinant products gives rise to continued research with different extracted and purified proteins. In a search for a new source of bone-matrix-derived BMP with high osteoinductive activity, BMP was extracted from fresh bone matrix of the premature moose (*Alces alces*). Bone-inducing activity was investigated by implanting 0.5-20 mg of BMP into thigh muscle pouches of BALB mice. Radiologically detectable formation of new bone required 2.0 mg of partially purified BMP. Immediately after the extraction, an analytic chromatogram with known molecular weight (MW) markers showed three fractions with different MWs. After 15 months of storage at +1°C lyophilized and desiccated, BMP was fractionated by HPLC gel filtration and bioassayed. New bone formation was evaluated qualitatively by histology and quantitatively by radiomorphometry, the quantity of calcified tissue per milligram of implanted agent being determined. Fractions I and III, with high (100-700 kD) and low MW (15-25 kD), respectively, were apparently more effective inducers of new bone than the second-time-tested partially

purified BMP complex, the activity of which had significantly ($p < 0.05$)

decreased during 15 months of storage compared to initial results after

extraction. However, the bone-inducing activity of fractions I and III

corresponded closely to the initial activity of the BMP complex. Fraction

II, with medium MW (25-55 kD), caused an apparent inflammatory reaction and no bone formation, and was thought to be immunogeneic.

Fraction III was considered to include the dominant BMP component with MW

18.5 and fraction I an association of BMP with other non-collagenous bone

matrix proteins after one-step gel filtration. The results suggest that

BMP from the premature moose has high bone-forming activity. With

identification and removal of apparently immunogenic protein fractions,

the inflammatory reaction and inhibitory effect on bone induction could be

eliminated, and still higher bone-forming activity was attained. Acid

protease enzymes were assumed to be responsible for the observed decline

in the inductive activity of semipurified BMP after 15 months of storage,

as both osteoinductive fractions proved to be acidic in isoelectric

focusing.

=> d his

(FILE 'HOME' ENTERED AT 15:54:32 ON 24 APR 2009)

FILE 'BIOSIS, CAPLUS, EMBASE' ENTERED AT 15:54:40 ON 24 APR 2009

L1	111 S BONE PARTICLE
L2	1693 S IMMOBILI? (3A) (MEDIUM OR MEDIA)
L3	1 S L1 AND L2
L4	15 S L2 AND BONE
L5	11 DUP REM L4 (4 DUPLICATES REMOVED)
L6	1206717 S BONE
L7	23765 S L6 AND WATER
L8	914 S L7 AND DIVID?
L9	39 S L8 AND SEPARAT?
L10	33 DUP REM L9 (6 DUPLICATES REMOVED)
L11	852 S BONE (3A) PARTICLE
L12	24019 S TISSUE (3A) (GRAFT OR GENERA?)
L13	4 S L11 AND L12

L14 3 DUP REM L13 (1 DUPLICATE REMOVED)
L15 23448 S BONE (3A) GRAFT
L16 424 S L15 AND (MEDIUM OR MEDIA)
L17 0 S L16 AND SOLIDF?
L18 0 S L16 AND SOLIDIF?
L19 12 S L16 AND MILL?
L20 10 DUP REM L19 (2 DUPLICATES REMOVED)

=> s l16 and free?

L21 46 L16 AND FREE?

=> dup rem l21

PROCESSING COMPLETED FOR L21

L22 40 DUP REM L21 (6 DUPLICATES REMOVED)

=> s l22 and py<=2002

L23 25 L22 AND PY<=2002

=> d bib abs 1-

YOU HAVE REQUESTED DATA FROM 25 ANSWERS - CONTINUE? Y/(N):y

L23 ANSWER 1 OF 25 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN

AN 1995:16806 BIOSIS

DN PREV199598031106

TI Effect of intravenous administration of hydroxyethyl-starch-deferoxamine

on oxygen-derived free radical generation in cancellous bone specimens obtained from dogs.

AU Lewis, Daniel D. [Reprint author]; Church, Daniel F.; Hosgood, Giselle

CS Dep. Small Anim. Clin. Sci., Coll. Vet. Med., Univ. Florida, Gainesville, FL 32610, USA

SO American Journal of Veterinary Research, (1994) Vol. 55, No. 11, pp. 1613-1617.

CODEN: AJVRAH. ISSN: 0002-9645.

DT Article

LA English

ED Entered STN: 11 Jan 1995

Last Updated on STN: 12 Jan 1995

AB The ability of IV administered hydroxyethyl-starch-deferoxamine to

attenuate radical production in freshly procured cancellous bone specimens

was investigated, using spin-trapping and electron spin resonance (ESR)

techniques. A core cancellous bone specimen 10 mm long and 5.6 mm in

diameter was obtained, using aseptic technique, from the proximal portion

of the humerus of 30 adult mixed-breed dogs. After procurement of the

initial bone specimen, 10 dogs received a 10% solution of hydroxyethyl-starch-deferoxamine in 0.9% NaCl (50 mg/kg of body weight, iv), 10 dogs received an equivalent volume (5 ml/kg, IV) of a 10% solution of hydroxyethyl-starch in 0.9% NaCl, and 10 dogs received 0.9% saline solution (5 ml/kg, IV). A second core cancerous bone specimen was obtained from the contralateral humerus of each dog 45 minutes after treatment. All specimens were individually incubated in the spin trap alpha-phenyl-N-tert-butyl nitron in Eagle's minimum essential medium, at 26 C for 45 minutes, then were frozen at -20 C until they were prepared for analysis by ESR spectroscopy. Each specimen was thawed, homogenized, and extracted in a low-dielectric organic solvent prior to obtaining an ESR spectrum, which was analyzed for hyperfine splitting constants for radical identification. Each first-derivative spectrum was digitally double-integrated to obtain an area; these areas were used to compare intensities of the spin adducts. Difference in the area obtained before and after treatment for each dog was expressed as a ratio of that dog's pretreatment area ((pretreatment - posttreatment)/pretreatment). The calculated ratios for saline-, hydroxyethyl-starch-, and hydroxyethyl-starch-deferoxamine-treated dogs were compared, using a Kruskal-Wallis (KW) nonparametric test for multiple comparisons of ranked data. Significance was determined at $P \leq 0.05$. Ad hoc comparisons were performed, using the KW procedure for individual comparisons, with alpha set at 0.05. The mean \pm SD and median ratio for each of the treatment groups were: saline-treated dogs, 0.005 ± 0.40 and 0.045 ; hydroxyethyl-starch-treated dogs, -0.063 ± 0.27 and -0.025 ; hydroxyethyl-starch-deferoxamine-treated dogs, 0.261 ± 0.278 and 0.335 , respectively. There was a significant ($P \leq 0.01$, KW) difference in the ratios between treatment groups. Ratios for hydroxyethyl-starch-deferoxamine-treated dogs were significantly ($P \leq$

0.05, KW) higher than that for hydroxyethyl-starch-treated dogs but not for saline-treated dogs. The ratios for saline- and hydroxyethyl-starch-treated dogs were not significantly different. We could not associate significant attenuation of radical generation in freshly harvested core cancellous bone specimens with IV administration of hydroxyethyl-starch-deferoxamine. The potential for unconjugated hydroxyethyl-starch to function as an oxidant must be considered.

L23 ANSWER 2 OF 25 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN

AN 1994:527626 BIOSIS

DN PREV199497540626

TI Cytokine stimulation of CD34+ bone marrow cells prior to cryopreservation

enhances their post-thawing proliferative potential.

AU Ratajczak, Mariusz Z. [Reprint author]; Ratajczak, Janina; Kregenov, David

A.; Kuczynski, Wojciech I.; Skorski, Tomasz; Gewirtz, Alan M.

CS Dep. Pathol., 230 John Morgan Build., Univ. Pennsylvania, 36th St. and

Hamilton Walk, Philadelphia, PA 19104, USA

SO Folia Histochemica et Cytobiologica, (1994) Vol. 32, No. 3, pp. 149-153.

CODEN: FHCYEM. ISSN: 0239-8508.

DT Article

LA English

ED Entered STN: 15 Dec 1994

Last Updated on STN: 15 Dec 1994

AB Marrow aplasia remains a significant cause of morbidity and mortality in

the peri-transplant period. Administration of recombinant human hematopoietic growth factors along with the marrow graft is a widely used

strategy to ameliorate this problem. Though arguably effective, this

approach is extremely expensive. To develop alternative strategies for

stimulating marrow engraftment, we investigated the utility of stimulating

CD34+ enriched bone marrow cells with cytokines prior to cryopreservation.

We found that culturing these cells for 1 to 3 days in Iscove's medium supplemented with kit ligand (KL), interleukin-3 (IL-3), interleukin-1-beta (IL-1-beta) and 20% bovine calf serum before freezing doubled the proliferative capacity of both myeloid and erythroid progenitor cells after thawing. Confirmation of increased

proliferative activity in vivo would suggest that this approach might

significantly shorten the period of marrow aplasia post
transplant at far
less expensive means.

L23 ANSWER 3 OF 25 BIOSIS COPYRIGHT (c) 2009 The Thomson
Corporation on STN

AN 1993:114401 BIOSIS

DN PREV199395058501

TI Validation of a serum-free growth factor-replenished in vitro
culture system for hematopoietic progenitor cells in healthy
donors and

recipients of an allogeneic bone marrow graft.

AU Van Den Berg, H. [Reprint author]; Van Tol, M. J. D.;
Oudemans-Gruber, N.

J.; Waaijer, J. L. M.; Wagemaker, G.; Vossen, J. M.

CS Dep. Pediatrics, Leiden Univ. Hosp., P.O. Box 9600, 2300 RC
Leiden, The

Netherlands, netherlands

SO European Journal of Haematology, (1992) Vol. 49, No. 5, pp.
269-274.

CODEN: EJHAEC. ISSN: 0902-4441.

DT Article

LA English

ED Entered STN: 27 Feb 1993

Last Updated on STN: 27 Feb 1993

AB The in vitro colony formation of hematopoietic progenitor cells
of bone

marrow samples, taken before and early after allogeneic bone
marrow

transplantation (BMT), was investigated prospectively. In order
to

circumvent culture-related and sample-related variations, a
serum-

free recombinant growth factor-replenished cultured system was
developed using T cell- and monocyte-depleted bone marrow
samples.

Samples of healthy bone marrow donors were used to validate the
technique.

The standardized culturing technique gave reproducible results,
with

numbers of colonies above those in conventional conditioned-
medium

technique. Colony formation in vitro of myelomonocytic
precursor cells

was found decreased in graft recipients, also after addition of
growth

factors, in comparison with healthy donors. The
growth-promoting effect

of the combination of IL-3 + GM-CSF was superior to that of
either growth

factor alone or conditioned medium. No effect was observed of T
lymphocytes and monocytes on in vitro colony formation after
bone marrow

transplantation, probably as a result of functional impairment of these cells at that period after transplantation.

L23 ANSWER 4 OF 25 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
AN 1992:139197 BIOSIS
DN PREV199293073422; BA93:73422
TI BONE TISSUE INVESTIGATION FOLLOWING MUSCLE-PEDICLE GRAFTING BONE IN RABBITS.
AU LU G [Reprint author]; ET AL
CS DEP ORTHOPAEDIC SURGERY, THE FIRST AFFILIATED HOSP, CHINA
SO Journal of China Medical University, (1991) Vol. 20, No. 4, pp. 288-291.
CODEN: ZYDXEN. ISSN: 0258-4646.
DT Article
FS BA
LA CHINESE
ED Entered STN: 12 Mar 1992
Last Updated on STN: 12 Mar 1992
AB Thirty rabbits were employed in this study. Glutaeus medium pedicle iliac bone graft was sectioned from left hip. Free bone graft was resected from right hip as a control. Bone grafts were surrounded with clinical pellicle of silica gel, then fixed in subcutaneous tissue. The animals were sacrificed and the specimens were taken for examination at 1, 2 and 3 weeks after the operation respectively. The results were as follows: 1. Histological components of the free bone graft were necrotic widely, but less amounts of cells survived. 2. Muscle-pedicle grafting bone gained nutrient from osteo-myogenic arterial system in the muscle pedicle. 3. Muslce-pedicle iliac bone graft retained bone tissue viability contiguous to the muscle pedicle, and produced new bone in regenerating player of periosteum.

L23 ANSWER 5 OF 25 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
AN 1991:521457 BIOSIS
DN PREV199192132917; BA92:132917
TI RECONSTRUCTION OF THE JAW WITH A FREE VASCULARIZED BONE GRAFT WITH SPECIAL REFERENCE TO THE SELECTION OF DONOR MATERIAL.
AU HARASHINA T [Reprint author]; INOUE T; UEDA K; HARADA T; SHIDARA Y; TERADA W; FUKUTAKE K
CS DEP PLASTIC RECONSTRUCTIVE SURGERY, SAITAMA MED CENT, SAITAMA MED SCH,

KAWAGOE 350, JPN

SO Japanese Journal of Plastic and Reconstructive Surgery, (1991)
Vol. 34, No. 9, pp. 941-950.
CODEN: KEGEAC. ISSN: 0021-5228.

DT Article

FS BA

LA JAPANESE

ED Entered STN: 19 Nov 1991
Last Updated on STN: 19 Nov 1991

AB From April 1977 up to the present report, the authors have experienced 21 cases of a microsurgical reconstruction of the upper and/or lower jaws. These cases have been analyzed from several aspects, especially with regard to the selection of donor materials to be used for this purpose. Out of the 21 cases, 3 involved the reconstruction of the upper jaw, and the remaining 18 involved the lower jaw. Used for these reconstructions were the following donor materials: 3 ribs, 8 iliums, 5 scapulas and 5 radiuses. Based on these experiences, the donor material used depends on the repair required. A rib, for instance, is of use for a defect requiring a long bone or, say, for augmentation of mentum in an irradiated case. An ilium is no longer a popular donor choice due to its excessive bulk and poor circulation within a skin island. However, it is good for the reconstruction of an ascending ramus, with or without a TM joint reconstruction. A radius is an appropriate donor choice for a small bony defect with a small or medium-sized intraoral lining. A scapula also is excellent donor material when concomitant soft tissue defect is extensive. However, when an osteotomy of the scapula is required, circulation in the distal bony segment cannot always be guaranteed. While the authors have had no experience using a fibula in a mandibular reconstruction, they feel that this donor material will gain more popularity because it provides a tough, long bone, and allows for a two-team approach, since the graft can be harvested while the patient is in a supine position.

AN 1986:171926 BIOSIS
 DN PREV198681082342; BA81:82342
 TI MOUSE SKIN GRAFT PROLONGATION WITH DONOR-STRAIN BONE MARROW AND
 ANTILYMPHOCYTE SERUM EFFECT OF BONE MARROW CELL STORAGE.
 AU DE FAZIO S R [Reprint author]; HARTNER W C; MONACO A P; GOZZO J J
 CS COLL PHARMACY AND ALLIED HEALTH, ROOM 211 MUGAR HALL, NORTHEAST
 UNIV, 360
 HUNTINGTON AVE, BOSTON, MASS 02115, USA
 SO Transplantation (Baltimore), (1986) Vol. 41, No. 1, pp. 26-28.
 CODEN: TRPLAU. ISSN: 0041-1337.
 DT Article
 FS BA
 LA ENGLISH
 ED Entered STN: 26 Apr 1986
 Last Updated on STN: 26 Apr 1986
 AB Significant extended survival of C3H/He skin grafts in
 antilymphocyte
 serum (ALS)-treated B6AF1 mice can be brought about by the
 injection of
 donor-strain bone marrow on day 6 or 7 after grafting. In the
 present
 study, survival of the active graft-prolonging bone
 marrow cells under several storage conditions was investigated.
 The bone
 marrow cells retained their effectiveness if stored at 4° C in
 10%
 fetal calf serum for 18 hr prior to injection, but not if
 maintained at
 37° C under standard lymphocyte culture conditions.
 Freezing the cells for 10 days in the cryoprotective
 medium preserved the ability of the cells to prolong graft
 survival. In fact, freeze thawed cells were more effective than
 fresh cells. Extension of the ALS-bone marrow treatment
 protocol to human
 transplantation is expected to be facilitated by frozen and
 short-term
 refrigerated storage of the donor bone marrow.

L23 ANSWER 7 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1962:438762 CAPLUS
 DN 57:38762
 OREF 57:7783f-i
 TI Studies in the transplantation of bone. III. The immune
 responses of lymph
 nodes draining components of fresh homologous cancellous bone
 treated by
 different methods
 AU Burwell, R. Geoffrey; Gowland, G.
 CS Univ. Leeds, UK
 SO J. Bone Joint Surg. 44B (1962) 131-48
 DT Journal
 LA Unavailable

AB cf. ibid. 43B, 814, 820(1961). Homologous grafts of cancellous bone (about 100 mg.) were inserted into the subcutaneous tissues of the left ear of rabbits. Some of the bones were pretreated by (a) boiling water for 10 min.; (b) freezing at -20° for 1 week; (c) immersion in 80% Ringer solution, 15% glycerol, and 5% donor serum and freezing at -79° for 1 week; (d) freeze-drying for 48 hrs.; (e) storing in solid CO₂ and irradiating with 2 + 106 rads from a Co source; and (f) storing in 0.1% Merthiolate at 4° for 6 weeks. Five or 8 days after inserting the graft, the regional lymph nodes draining the graft and the control contralateral lymph nodes were removed, weighed, fixed in Carnoy fluid, and histol. sections were stained with methyl green-pyronine. The grafted tissues were fixed in 10% HCHO-saline, decalcified in ethylenediaminetetraacetate, and histol. sections were stained. The results suggested that fresh homologous bone marrow was highly antigenic, whereas marrow-free homologous cancellous bone was weakly antigenic. Treatments (a), (b), (d), (e), and (f) markedly reduced its antigenicity, whereas there was only a small reduction in antigenicity after (c). The conclusion was reached that the principal antigenic component. of fresh bone is the nucleated cells of red marrow. The immune response of large- and medium-sized cells of lymph nodes draining homografts is due principally to the T antigens. It was suggested that this lymph node response may be generally useful as an assay of the antigenicity of transplanted tissues. 63 references.

L23 ANSWER 8 OF 25 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1951:47563 CAPLUS
DN 45:47563
OREF 45:8115b-d
TI The role of alkaline phosphatase in osteogenesis
AU Siffert, Robert S.
CS Mount Sinai Hosp., New York, NY
SO Journal of Experimental Medicine (1951), 93, 415-26
CODEN: JEMEAU; ISSN: 0022-1007
DT Journal

LA Unavailable

AB The observations on the sites of localization of alkaline phosphatase (I) and phosphate (II) in epiphyseal ossification were compared with the findings on the ossification of bone graft beds. The distribution of chondroitinsulfate and the elaboration of bone matrix in relation to II deposition was also studied. I activity and free II do not always coincide. I appears to be intimately connected with preosseous cellular metabolism and to the elaboration of a bone matrix that is chemically calcifiable. There is a possibility that I may be involved in making inorg. salts available to the calcifiable matrix. If this function exists, it is secondary because elaboration of bone matrix, which is always associated with I activity, is able to occur in the absence of calcification. It is possible for calcification to occur later in the absence of I. Cartilage matrix may be utilized in the formation of bone matrix. I is physiologically active only in the presence of living cells. I appears to be physiologically inactive in the cartilage remnants of the metaphysis. Since I is reversibly inactivated in weakly acid media, it is possible that the enzyme may survive in a physiologically inactive state in weakly acid tissues and yet remain capable of histochem. demonstration in vitro in an alkaline medium. I is not related to the disappearance of chondroitinsulfate.

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AN 2002096935 EMBASE

TI The effects of varying degrees of allograft decalcification on cultured porcine osteoclast cells.

AU Herold, Robert W.; Pashley, David H.; Cuenin, Michael F.; Niagro, Frank;

Hokett, Steven D. (correspondence); Peacock, Mark E.; Mailhot, Jason;

Borke, James

CS Tingay Dental Clinic, U.S. Army Dental Activity, Bldg. 320, East Hospital

Road, Fort Gordon, GA 30905, United States.
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1

SO Journal of Periodontology, (2002) Vol. 73, No. 2, pp. 213-219.

Refs: 29

ISSN: 0022-3492 CODEN: JOPRAJ

CY United States

DT Journal; Article

FS 027 Biophysics, Bioengineering and Medical Instrumentation
009 Surgery

LA English

SL English

ED Entered STN: 28 Mar 2002

Last Updated on STN: 28 Mar 2002

AB Background: Demineralized freeze-dried bone allograft (DFDBA) is
widely used in periodontal therapy as a scaffold for new bone
formation in

periodontal defects. It is demineralized, theoretically, to
expose

osteoinductive or osteoconductive bone matrix proteins that
should

facilitate osteogenesis. The degree of DFDBA demineralization
varies

between tissue banks and may affect clinical regeneration. A 2%
residual

calcium level in DFDBA has been shown to result in the highest
alkaline

phosphatase activity levels in cultured human periosteal cells
and is

optimally osteoinductive or osteoconductive for new bone
formation. The

purpose of this study was to evaluate the effect of 4 different
residual

calcium levels in commercially available DFDBA samples on porcine
osteoclast activity as measured by resorption on calcium
phosphate-coated

disks. Methods: Bone marrow was harvested from the femurs of
3-week-old

farm pigs and cultured for 3 weeks. Hematopoietic stem cells
were allowed

to differentiate into mature active polykaryons displaying
genuine

osteoclast characteristics. The osteoclast cells displayed a
dense actin

band inside the margins of the cytoplasm under light microscopy.

Culture

media was decanted and collagenase added to free the
attached cells. Equal cell samples were pipetted onto calcium
phosphate-coated disks in 24-well plates. DFDBA samples with

1.44%,

2.41%, and 5.29% residual calcium; FDBA (30% residual calcium);

and

control cultures without allograft samples were prepared and all samples incubated for 1 week. Cells were fixed and stained for tartrate-resistant acid phosphatase (TRAP), Oregon Green 488-phalloidin, a stain for cytoskeletal proteins, and counterstained with propidium iodide. Specimens were examined by light and fluorescence microscopy using epi-illumination. Calcium phosphate disks were then rinsed in 5% sodium hypochlorite to remove adherent osteoclasts, and substrate surface changes were measured by white light interferometry and image analysis.

Results:

A higher yield of TRAP-positive cells was produced without DFDBA; however, resorptive activity appears to be significantly increased in the presence of 2.41% residual calcium as compared to all other experimental groups ($P < 0.0065$). Conclusion: In this in vitro model, porcine osteoclasts show significantly more resorptive activity as measured on calcium phosphate-coated disks in the presence of 2.41% residual calcium in DFDBA than in other DFDBA residual calcium levels.

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AN 2002029637 EMBASE

TI The role of angiography in the lower extremity using free vascularized fibular transplants for mandibular reconstruction.

AU Kessler, Peter, Dr. (correspondence); Wiltfang, Jorg; Schultze-Mosgau, Stefan; Lethaus, Bernd

CS Department of Oral and Maxillofacial Surgery, Germany.
peter.kessler@mkg.i
med.uni-erlangen.de

AU Greess, Holger; Wilhelm Neukam, Friedrich

CS Institute of Diagnostic Radiology, University of
Erlangen-Nurnberg,
Erlangen, Germany.

AU Kessler, Peter, Dr. (correspondence)

CS Dept. of Oral/Maxillofacial Surgery, Univ. of Erlangen-Nurnberg,
Gluckstrasse 11, D-91054 Erlangen, Germany.
peter.kessler@mkg.imed.uni-erl
angen.de

SO Journal of Cranio-Maxillofacial Surgery, (2001) Vol. 29, No. 6,
pp.

332-336.

Refs: 18

ISSN: 1010-5182 CODEN: JCMSET

CY United Kingdom

DT Journal; Article

FS 011 Otorhinolaryngology

014 Radiology

016 Cancer

033 Orthopedic Surgery

LA English

SL English

ED Entered STN: 7 Feb 2002

Last Updated on STN: 7 Feb 2002

AB Background: Fibular osteocutaneous free tissue transfer represents the work horse procedure in the reconstruction of large

oromandibular defects. Before the fibula is harvested the blood supply of

the lower leg and foot should be examined, as the perfusion may be based

predominantly on the peroneal artery and venae comitantes. To avoid

postoperative ischaemia of the lower leg, adequate perfusion must be

guaranteed before sacrificing the peroneal vessels. Anatomical variations

and peripheral arterial occlusive disease add to the risk of ischaemia.

Various methods of evaluating the blood supply have been described.

Material and methods: Fifty-two consecutive cases of fibular flaps were

evaluated to study the arterial blood supply of the lower extremity. For

angiography, the right femoral artery was punctured using the Seldinger

technique and a total of 20-25 ml contrast medium (Imeron® 300) was infused and images required at a rate of 0.5/sec.

Results: A

patent three-vessel supply to both feet could only be detected in 21

patients. Thirty-one angiograms revealed anatomic and/or arteriosclerotic

alterations. Angiography provided accurate information in all patients

and allowed successful fibular transfer in those patients who were found

preoperatively to have regular conditions. Conclusion: Preoperative

assessment of the blood supply of the lower extremity is important before

fibular osteocutaneous free tissue transfer. We advocate angiography as interpretation is not examiner dependent.

.COPYRGT. 2001

European Association for Cranio-Maxillofacial Surgery.

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AN 2001167835 EMBASE

TI Frontal sinus malignancies.

AU Osguthorpe, J. David, Dr. (correspondence); Richardson, Mary

CS Departments of Otolaryngology and Communicative Sciences and Pathology,

Medical University of South Carolina, Charleston, SC, United States.

AU Osguthorpe, J. David, Dr. (correspondence)

CS Medical University of South Carolina, 150 Ashley Avenue, Charleston, SC

29425, United States.

SO Otolaryngologic Clinics of North America, (2001) Vol. 34, No. 1, pp.

269-281.

Refs: 23

ISSN: 0030-6665 CODEN: OCNABW

CY United States

DT Journal; General Review; (Review)

FS 011 Otorhinolaryngology

016 Cancer

027 Biophysics, Bioengineering and Medical Instrumentation

LA English

SL English

ED Entered STN: 23 May 2001

Last Updated on STN: 23 May 2001

AB Frontal sinus malignancies comprise 2% to 3% of those occurring in the

paranasal region. Patients commonly present with forehead pain and

swelling, orbital disturbances, epistaxis, and nasal purulence.

A

combination of CT and MR imaging delineate the tumor and its relationship

with the adjacent dura and periorbita. Low-grade malignancies are

addressed with en bloc extirpation, with lower frontal sinus and adjacent

ethmoid lesions approached through a superior rhinotomy, and more extensive lesions through a combination of a bicoronal flap and rhinotomy.

Postoperative irradiation is appropriate for medium- to high-grade lesions. Small to medium defects are closed with local rotation flaps and larger defects with free flaps. Bony reconstruction can range from a split calvarial bone graft to mini plates and wire mesh.

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AN 2001070341 EMBASE

TI [Postoperative monitoring of vascularized free fibular grafts by dynamic contrast-enhanced of MRI. A preliminary report on three cases of mandibular reconstruction].
Surveillance postoperatoire des lambeaux libres osseux de perone ou fibula par IRM dynamique. Resultats preliminaires a propos de trois cas en reconstruction mandibulaire.

AU Bey, E. (correspondence); Paraque, A.; Cariou, J.L

CS Service de Chirurgie Plastique, Hopital d'Instruction des Armees Begin,
94100 Saint-Mande, France.

AU Pharaboz, C.

CS Service de Radiologie, Hopital d'Instruction des Armees Begin,
94100 Saint-Mande, France.

AU Bey, E. (correspondence)

CS Service de Chirurgie Plastique, Hop. d'Instruction des Armees Begin, 69,
avenue de Paris, 94100 Saint-Mande, France.

SO Annales de Chirurgie Plastique et Esthetique, (2001) Vol. 46,
No. 1, pp.
10-17.
Refs: 15
ISSN: 0294-1260 CODEN: ACESEQ

CY France

DT Journal; Article

FS 011 Otorhinolaryngology
014 Radiology
009 Surgery

LA French

SL English; French

ED Entered STN: 1 Mar 2001
Last Updated on STN: 1 Mar 2001

AB The vascularized free fibular graft has been used in mandibular reconstructive surgery since 1975. This technique has been progressively developed, and it is now the procedure of choice for mandibular reconstruction although in certain postoperative circumstances it can be difficult if not impossible to monitor bone vitality. However, bone vascularization can be detected by dynamic magnetic resonance imaging (MRI), as this technique has been experimentally and clinically validated in the early diagnosis of osteonecrosis. The aim of this study was to evaluate the efficacy of MRI for the postoperative monitoring of

vascularized free fibular grafts in human mandibular reconstruction. Dynamic contrast-enhanced MRI was used to study the variation in contrast over time following injection of gadolinium contrast medium, and to evaluate the degree of bone marrow perfusion of the fibular graft. This variation in signal intensity was visualized in the form of a curve, i.e., a perfusion curve for the bone marrow region. An examination was performed in three patients at different postoperative times and under different conditions. In one case, MRI confirmed the presence of fibula blood supply in spite of the necrosis of the adjacent fascio-adipose layer. In this article, the methodological difficulties have been discussed, particularly as regards data processing, and the present results have been compared with the findings in the literature. Dynamic MRI is a simple, reliable, non-invasive technique and its use in the postoperative monitoring of bone marrow perfusion and vascularized free fibular grafts permits a determination of the status of the latter following surgery, i.e., whether there is an adequate blood supply or not. .COPYRGT. 2001 Editions scientifiques et medicales Elsevier SAS.

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AN 2000425798 EMBASE

TI [Multislice CT: Principles and new CT-scan applications].
Scanners multicoupes: Principes et nouvelles applications
scanographiques.

AU Blum, A. (correspondence); Walter, F.; Ludig, T.; Zhu, X.;
Roland, J.

CS Service d'Imagerie Guilloz, Hopital Central, CHU Nancy, 29,
avenue

de-Lattre-de-Tassigny, 54035 Nancy Cedex, France.

SO Journal de Radiologie, (2000) Vol. 81, No. 11, pp. 1597-1614.
Refs: 31

ISSN: 0221-0363 CODEN: JRMDAH

CY France

DT Journal; Article

FS 014 Radiology

006 Internal Medicine

LA French
SL English; French
ED Entered STN: 21 Dec 2000
Last Updated on STN: 21 Dec 2000
AB The introduction of new array detector technology for multislice CT improves CT-scan capabilities. Compared to single-slice helical CT, this technique offers three significant advantages: the pitch can be increased by a factor of 4, resulting in shorter acquisition times and contrast media saving, the temporal and spatial resolution are improved and the slice thickness can be freely and retrospectively selected. This technique promises to revolutionize radiological practice, just as spiral systems did a decade ago. Multislice CT is particularly suitable for exploring the chest, the heart and the vessels. It is also specially useful for musculo-skeletal explorations and trauma patients.

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AN 2000179889 EMBASE

TI Resection arthrodesis of the knee with a vascularised fibular graft:

Medium- to long-term results.

AU Wada, Takuro, Dr. (correspondence); Usui, Masamichi; Nagoya, Satoshi; Isu, Kazuo; Yamawaki, Shinya; Ishii, Seiichi

CS Sapporo Medical University, National Sapporo Hospital, Sapporo, Japan.

AU Wada, Takuro, Dr. (correspondence); Usui, Masamichi; Nagoya, Satoshi; Ishii, Seiichi

CS Department of Orthopaedic Surgery, Sapporo Medical University, S-I, W-16, Sapporo 060-8543, Japan.

AU Isu, Kazuo; Yamawaki, Shinya

CS Orthopaedic Clinic, National Sapporo Hospital, 4-2 Kikusui, Sapporo 030, Japan.

AU Wada, Takuro, Dr. (correspondence)

CS Dept. of Orthopaedic Surgery, Sapporo Medical University, S-1, W-16, Sapporo 060-8543, Japan.

SO Journal of Bone and Joint Surgery - Series B, (May 2000) Vol. 82, No. 4, pp. 489-493.

Refs: 16
 ISSN: 0301-620X CODEN: JBSUAK
 CY United Kingdom
 DT Journal; Article
 FS 033 Orthopedic Surgery
 LA English
 SL English
 ED Entered STN: 8 Jun 2000
 Last Updated on STN: 8 Jun 2000
 AB We present the results in 12 patients of arthrodesis of the knee using a
 vascularised fibular graft after resection of a malignant bone tumour. At
 a mean follow-up of 95 months (60 to 178) all patients were free from disease although 11 had had at least one complication, with stress
 fracture of the graft in five patients, nonunion in two and deep infection
 requiring above-knee amputation in one. Despite the high rate of complications, satisfactory results can be obtained using this technique.
 Careful preoperative counselling is required.

L23 ANSWER 15 OF 25 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights reserved on STN
 AN 1999359296 EMBASE
 TI Acetabular reconstruction with morcellized allograft and ring support: A
 medium-term review.
 AU Haddad, F.S. (correspondence)
 CS 46B Hanover Gate Mansions, Park Road, London NW1 4SN, United Kingdom.
 AU Shergill, N.; Muirhead-Allwood, S.K.
 SO Journal of Arthroplasty, (Oct 1999) Vol. 14, No. 7, pp. 788-795.
 Refs: 33
 ISSN: 0883-5403 CODEN: JOAREG
 CY United States
 DT Journal; Article
 FS 033 Orthopedic Surgery
 LA English
 SL English
 ED Entered STN: 29 Oct 1999
 Last Updated on STN: 29 Oct 1999
 AB Acetabular bone stock deficiency is commonly encountered in revision hip
 surgery. A number of techniques are available to address this problem,
 including the use of particulate allograft with reconstruction rings in an
 effort to provide a stable construct and replenish bone stock.
 Our

technique and results using such devices in complex acetabular deficiencies are described. In the setting of a large medial segmental or cavitary acetabular defect, morcellized bone-graft is used to reconstitute the acetabular floor. This graft is reverse reamed until its depth allows screw fixation of a metallic support ring. The screws also serve to compress the graft. A polyethylene acetabular component is then cemented into the reconstituted acetabulum with full freedom of orientation. A series of 48 patients in whom this technique was employed is presented. These cases have been clinically and radiologically reviewed with a mean follow-up of 64 months (range, 25-102 months). Good bony incorporation with stable acetabular components was seen in all but the two cases in which sepsis predominated.

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AN 1998006688 EMBASE

TI [Cement-free revision arthroplasty of the acetabulum -
Medium range results of the trabecular cup implant].
Zementfreie revisionsarthroplastik der huftpfanne -

Mittelfristige

ergebnisse mit dem trabekular orientierten pfannenimplantat.

AU Wirtz, D.; Thielemann, F.; Holz, U.

CS Orthopadische Universitätsklinik, Klinik für Unfall- und
Wiederherstellungschirurgie, Zentrum für Chirurgie.

AU Wirtz, D.

CS WirtKlinik für Unfall- und Wiederherstellungschirurgie, Zentrum
für

Chirurgie Katharinenhospital Stuttgart, Kriegsbergstrasse 60,
D-70174

Stuttgart.

AU Wirtz, D.C., Dr. (correspondence)

CS Klin. Unfall/Wiederherstellungschir., Zentrum für Chirurgie,
Katharinenhospital Stuttgart, Kriegsbergstrasse 60, D-70174
Stuttgart,
Germany.

SO Zeitschrift für Orthopädie und Ihre Grenzgebiete, (1997) Vol.
135, No. 4,
pp. 301-309.

Refs: 37

ISSN: 0044-3220 CODEN: ZOIGAP

CY Germany

DT Journal; Article

FS 033 Orthopedic Surgery

LA German
SL English; German
ED Entered STN: 22 Jan 1998
Last Updated on STN: 22 Jan 1998
AB Purpose: In the case of hip revision arthroplasty, cementless implants combined with bone grafts are increasingly used to reconstruct the acetabular bone stock. The study on hand reports about the results with the trabecular orientated cup implant of CopflHolz after 10 years of application. Method: A total of 256 hip revision arthroplasties were prospectively recorded with a mean follow-up period of 5.6 years. For the osseous augmentation of the acetabulum, autogenous bone was used in 227 cases, allogenic spongy bone in 15 cases and mixed bony materials in 8 cases. The clinical and radiological follow-ups were done after 3, 6, 12 months and then in 2-years intervals. Results: Within the 10 years follow-up 3 rerevisions must be done because of deep infection, 6 rerevisions because of aseptic loosening or primary instable fixation. The specific failure rate of the used cup implant amounts to 96.2% five years after revision arthroplasty, and 86.8% ten years after revision arthroplasty. Revealed from a radiological point of view, the transplanted spongiosa showed in 83.5% a complete osseous integration one year after the operation. Worse incorporation was conspicuous especially when allografts or mixed bone grafts were used. Clinically, a permanent improvement of motion, pain and walking ability was seen postoperatively. 91% of all follow-up patients were satisfied with the result of the revision arthroplasty. Conclusions: The trabecular orientated cup implant has proven itself worthy for cementless cup revision arthroplasty and will be an alternative to the cups and rings used up to now for the reconstruction of great acetabular bone deficiencies.

AN 1995354149 EMBASE
TI [Twenty years activity of Bone Banking in S. Martino Hospital,
Genoa,
Italy].
VENTI ANNI DI ATTIVITA DELLA BANCA DELL'OSSO DEL SERVIZIO DI
IMMUNOLOGIA
DELL'OSPEDALE SAN MARTINO DI GENOVA.
AU Costantini, M.; Lacagnina, R. (correspondence); Dessi, V.
CS Via delle Sacramentine, 2/8, 16145 Genova, Italy.
SO Minerva Ortopedica e Traumatologica, (1995) Vol. 46, No. 9, pp.
435-440.
ISSN: 0026-4911 CODEN: MOTRE8
CY Italy
DT Journal; Conference Article; (Conference paper)
FS 017 Public Health, Social Medicine and Epidemiology
026 Immunology, Serology and Transplantation
033 Orthopedic Surgery
LA Italian
SL Italian; English
ED Entered STN: 28 Dec 1995
Last Updated on STN: 28 Dec 1995
AB The S. Martino Hospital Bone Bank, one of the first in Italy,
was set-in
in 1971 as an activity of the Immunology Service; the Bank is
still fully
operative in collaboration with several local and regional
Orthopedic
Centers, with a total of 1531 femoral heads received between
1971 and 1993
and 609 effectively utilized for bone allografts. Improvements
have been
made in the years to reach high standards of sterility and
safety.
Personal data and medical history of the donors are carefully
recorded and
serological and bacteriological investigations are carried out to
ascertain the absence of any transmissible disease of bacterial,
viral or
unknown origin. Bones are immediately frozen under sterile
conditions at
-80°C in polypropylene containers as soon as they arrive at the
Bank. Prior to storage, fragments taken from the surface and
marrow
sections are cultured in both, aerobic or anaerobic specific
media
to screen for sterility. Bones from suitable donors and
negative for
microbiological tests are transferred in a deep-freezer and
stored without any further manipulation until they are used.
Matching for
ABO and Rh blood groups, but not histocompatibility antigens
(HLA) is

observed in selecting donor-recipient pairs, particularly for female recipients of child bearing age. Post-transplant problems due to toxic side-effects, septic infections or graft-rejection reactions were never observed in our many-year experience.

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AN 1995138772 EMBASE

TI The role of free pericranium grafts in augmentation rhinoplasty.

AU Ioannides, C., Dr. (correspondence); Fossion, E.

CS Department of Plastic Surgery, University College Hospitals, Mortimer

Street, London W1N 8AA, United Kingdom.

SO Journal of Cranio-Maxillo-Facial Surgery, (1995) Vol. 23, No. 2, pp.

105-108.

ISSN: 0301-0503 CODEN: JCMSET

CY United Kingdom

DT Journal; Article

FS 011 Otorhinolaryngology
009 Surgery

LA English

SL English

ED Entered STN: 23 May 1995

Last Updated on STN: 23 May 1995

AB Various tissues and materials have been used in augmentation rhinoplasty.

This paper presents a retrospective analysis of 14 patients, 8 female and

6 male, in whom free pericranium grafts were used in order to restore postsurgery or posttraumatic nasal defects. There were no

complications from either the donor or the recipient site. The early and

medium term results were satisfactory. It is concluded that free pericranium, compared with other autografts, is a good alternative due to its several advantages and hardly any disadvantages.

In selected cases it can even be the material of choice.

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AN 1995038609 EMBASE

TI Ethylene oxide sterilization of bone grafts.:Residual gas concentration

and fibroblast toxicity.

AU Arizono, T. (correspondence); Iwamoto, Y.; Okuyama, K.; Sugioka, Y.

CS Department of Orthopedics, Faculty of Medicine, Kyushu
University, Fukuoka
812, Japan.

SO Acta Orthopaedica Scandinavica, (1994) Vol. 65, No. 6, pp.
640-642.

ISSN: 0001-6470 CODEN: AOSAAK

CY Denmark

DT Journal; Article

FS 033 Orthopedic Surgery

LA English

SL English

ED Entered STN: 15 Feb 1995

Last Updated on STN: 15 Feb 1995

AB We examined the concentration of ethylene oxide in bone
allografts after

gas sterilization. Chips of the human femoral head were
investigated,

Residual gas concentration was determined by gas chromatography
after the

bone chips had been subjected to defatting and freeze-drying,
followed by ethylene oxide gas sterilization. Bones were
prepared in

various ways in an attempt to reduce the concentration of
residual

ethylene oxide. The concentration was higher when gas
sterilization was

performed before freeze-drying than when it was done afterwards.

An experiment performed with fibroblasts showed the high
toxicity of

residual ethylene oxide in bone chips, even when the
concentration was

very low. The growth of fibroblast was reduced more in medium
which had been shaken with bones sterilized with ethylene oxide
before

freeze-drying than in medium which had been shaken with
bones sterilized after freeze-drying. The higher residual
ethylene oxide concentrations resulted in a decrease in
fibroblastic

culture activity. Our experiment showed the importance of
reducing the

residual ethylene oxide gas concentration. Defatting and freeze
-drying result in lower residual ethylene oxide concentrations.

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AN 1993086004 EMBASE

TI The induction of IL-1 by freeze-dried ethylene oxide-treated
bone-patellar tendon-bone allograft wear particles: An in vitro
study.

AU Silvaggio, V.J., Dr. (correspondence); Fu, F.H.; Georgescu,
H.I.; Evans,

C.H.

CS Ferguson Lab Orthopaedic Research, Univ Pittsburgh School of Medicine, 986

Scaife Hall, Pittsburgh, PA 15261, United States.

SO Arthroscopy, (1993) Vol. 9, No. 1, pp. 82-86.

ISSN: 0749-8063 CODEN: ARTHE3

CY United States

DT Journal; Article

FS 029 Clinical and Experimental Biochemistry

033 Orthopedic Surgery

LA English

SL English

ED Entered STN: 25 Apr 1993

Last Updated on STN: 25 Apr 1993

AB There have been recent reports of adverse clinical results with freeze-dried ethylene oxide-treated bone-patellar tendon-bone (FD-ETO-BPTB) allografts used in anterior cruciate ligament (ACL) reconstruction. Ethylene oxide and its residues were implicated as the

cause of many of the failures. Wear particles generated from both

freeze-dried ethylene oxidetreated and deep frozen bone-patellar tendon-bone (DF-BPTB) allografts were placed in culture with

lapine

synoviocytes. The resulting synovial conditioned media were then assayed for interleukin-1 (IL-1) content. IL-1 is a potent mediator

of tissue inflammation. FD-ETO-BPTB wear particles generated statistically significant levels of IL-1 when compared with both

a

negative control and DF-BPTB wear particles.

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AN 1988221582 EMBASE

TI Vascular medullary patency in free vascularized bone grafts: CT scan experimental study.

AU Gonzalez del Pino, J.; Knapp, K.; Gomez Castresana, F.; Benito, M.;

Gutierrez de la Camara, A.; Canosa, R.; De Miguel, E.

CS Department of Orthopaedic Surgery, Hospital 'La Paz', Madrid, Spain.

SO Journal of Reconstructive Microsurgery, (1988) Vol. 4, No. 4, pp. 271-276.

ISSN: 0743-684X CODEN: JRMIE2

CY United States

DT Journal; Article

LA English

SL English

ED Entered STN: 11 Dec 1991

Last Updated on STN: 11 Dec 1991

AB In an experimental study using 13 mongrel adult dogs, 6 cm of the anterior part of the left ninth rib were harvested, including the posterior intercostal vessels. The grafts were transferred, based on the periosteal circulation alone, to a previously induced femoral head ischemic necrosis. Microsurgical anastomoses were performed between the posterior intercostal vascular bundle and the caudal gluteal vessels at the recipient thigh zone. Using a high resolution CT scan and morphologic evaluation, it was demonstrated that the medullary circulation network filled on contrast medium. The entire cortex and medullary cavity were supplied from endosteal vessels coming from a reversed periosteal blood flow.

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AN 1980030627 EMBASE

TI Collagen synthesis and degradation in embryonic chick-bone explants.

AU Sakamoto, M.; Sakamoto, S.; Brickley-Parsons, D.; Glimcher, M.J.
CS Dept. Periodontol., Harvard Sch. Dent. Med., Boston, Mass., United States.

SO Journal of Bone and Joint Surgery - Series A, (1979) Vol. 61, No. 7, pp.

1042-1052.

ISSN: 0021-9355 CODEN: JBJS A3

CY United States

DT Journal; Article

FS 033 Orthopedic Surgery

005 General Pathology and Pathological Anatomy

LA English

ED Entered STN: 9 Dec 1991

Last Updated on STN: 9 Dec 1991

AB Studies of collagen biosynthesis and degradation were carried out in

embryonic chick-bone explants grown in tissue culture to determine whether

a large fraction of newly synthesized collagen was degraded without being

incorporated into bone. The incorporation of (3)H-proline into the

(3)H-hydroxyproline of bone collagen and into free hydroxyproline and hydroxyproline-containing peptides released into the

culture medium was determined during eight days in culture. The

hydroxyproline content of embryonic chick bone increased
1.9-fold after
eight days in culture and the mineral content increased
significantly.
Approximately one-half of the collagen synthesized was retained
in the
bone and one-half was released into the tissue-culture medium.
The newly synthesized collagen accounted for almost all of the
collagen
released into the medium; very little was derived from the
breakdown of structural collagen present in the fabric of the
bone tissue
before explantation.

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AN 1978278886 EMBASE
TI [Bone bank of the orthopedic clinic, Karl Marx University
(Leipzig)].
DIE KNOCHENBANK DER ORTHOPADISCHEN KLINIK DER
KARL-MARX-UNIVERSITÄT
LEIPZIG.
AU Knoefler, E.W.
CS Orthop. Klin., Karl-Marx-Univ., Leipzig, German Democratic
Republic.
SO Beiträge zur Orthopädie und Traumatologie, (1978) Vol. 25, No.
2, pp.

72-80.
ISSN: 0005-8149 CODEN: BOTRAJ
CY German Democratic Republic
DT Journal
FS 017 Public Health, Social Medicine and Epidemiology
033 Orthopedic Surgery
009 Surgery
LA German
AB All that is required for a bone bank is a medium-sized
freezer. Operation costs are minimal. Good cooperation with an
institute of forensic medicine is necessary. The deep-freezing
technique is simplest and gives mechanically and biologically
optimal chip
material. A report is presented of more than 20 years'
experience of the
orthopedic clinic of the Karl Marx University, Leipzig, with
approx. 2500
implantations of chips of cortical and spongy bone. The
material offers
many advantages over bone autografts; the many applications
developed over
the years are described. Given adequate preparation and
skillful surgical
technique, the rate of infection is not higher than for other
comparable

operations. A number of special methods with which particularly good results have been obtained are described.

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AN 1977192605 EMBASE

TI Results of surgical obliteration of the tympanic bulla of rabbits by means

of free bone autotransplants (Russian).

AU Melaniyin, V.D.; Botpaev, A.K.

CS Kaf. Bol. ORL, Tsent. n.i. Lab., I Med. Inst., Moscow, USSR.

SO Vestnik Oto-Rino-Laringologii, (1976) Vol. 38, No. 6, pp. 34-38. ISSN: 0042-4668 CODEN: VORLA7

DT Journal

FS 011 Otorhinolaryngology

LA Russian

AB The authors present the dynamics of reparative reconstruction of autobone

implanted in the finely ground condition into the tympanic bulla of

rabbits. Chronic purulent otitis was induced. Obliteration of the bulla

was carried out not earlier than 1.5 mth after the infection.

The bone

for grafting was recovered from the posterior limb of the animals.

Morphological studies demonstrated that the slits between the implanted

bone fragments were filled with connective tissue in the course of the

immediate postoperative month. The transplanted bone tissue was resolved,

and stimulated the osteogenesis. The first signs of osteogenesis were

revealed by the end of the month after the transplantation, and in 6-9 mth

the bullae proved to be completely obliterated by the regenerated bone, at

first spongy and later compact. The authors believe bone tissue to be one

of the optimal materials for the surgical obliteration of the trephine

cavities in the middle ear of patients. Reliable surgical treatment and

complete removal of the mucosa of the mastoid process cells are conditions

which should be observed to obtain favorable results; the bone graft should be placed in such a way that it is completely surrounded with the recipient's bone and does not come into contact with

the soft tissues; at the early postoperative period suitable conditions for the outflow of the discharge should be created; antibiotics must be prescribed for healing the soft tissue wound. Cavities formed as a result of previous operations should not be filled with bone tissue.

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AN 1977188633 EMBASE

TI [The Kiel bone graft for repair of cranial vault defects].

DEFEKTDECKUNG AM SCHADELDACH MIT KIELER KNOCHENSPAN.

AU Magistris, F.

CS Chir. Abt., Krankenh. Hollabrunn, Austria.

SO Chirurgische Praxis, (1976) Vol. 21, No. 3, pp. 365-370.

ISSN: 0009-4846 CODEN: CHPRBU

DT Journal

FS 011 Otorhinolaryngology

008 Neurology and Neurosurgery

LA German

AB For the primary cover of minor cranial vault defects (bore hole size up to

6.5 x 4.5 cm) as occur in emergency surgery, spongiosa slices (Kiel bones)

were used between 1967 and 1973 in 12 patients. Two cases illustrate the

simple and complication free technic, in particular, the absence of effect of the nutrient medium of the macerated bone, but they also indicate the limits of the method and the fate of such a graft in a

callus weak bone support because of failure of the incursive replacement

and osseous inclusion to appear. In the area of the cranial vault primary

cover with spongiosa slices should therefore remain confined to the order

of magnitude of about 30 x 30 mm.

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